

JUNE 1915 - No. 114

Issued Every Month

For Free Distribution to Users  
of Machine Tools

**HITCHCOCK'S**  
**MACHINE**  
**TOOL LIST**

A Reference Book for Buyers  
of Iron Working Machinery

Published by  
**A. H. Hitchcock**  
1220-1235 Caxton Building  
Chicago

**Convenience  
Multiplied**

*means*

**Costs  
Minimized**

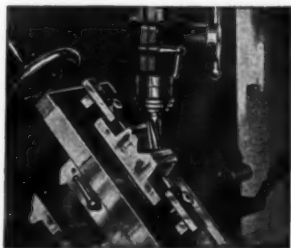


**That's What Goes With A  
Knight Milling and Drilling Machine**

Its great convenience makes it equal to 2 or 3 ordinary machines. Consequently the time on tool room work and other difficult machining is reduced 20 to 50 per cent. You can mill, bore and drill at any angle with only one setting of the work. Knights have no equal for dies, jigs, metal patterns, etc. They are accurate, sturdy and reliable. Three sizes.

**W. B. Knight Machinery Company  
St. Louis, Mo.**

*Send for our  
Booklet and  
see how much  
money these  
machines could  
save you*



# Stop Your Time Cost at One Operation

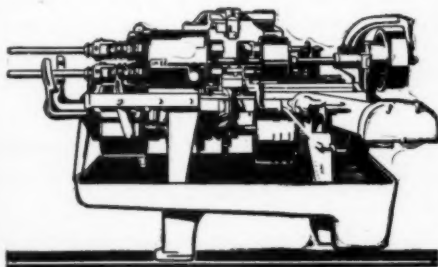
Acme Multiple Spindle Automatics complete the actual cutting on screw machine work in the time of the longest single operation because

**"all the tools work at once."**

Acmes are readily tooled up for eight or ten operations. They're economical in use and work accurately over the widest range of screw cutting requirements.

Send your samples for the production estimates. Sizes:  $2\frac{1}{4}$ " diameter and smaller.

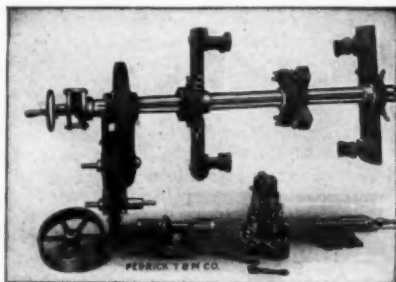
*Catalog No. 10, a new, complete treatise on Acme Automatics, sent upon request.*



**THE NATIONAL-ACME MFG. CO.**  
**CLEVELAND, O.**

New York Boston Chicago Detroit Atlanta Montreal

## Headquarters For Portable Boring Bars



Since the time Portable Boring Bars were first manufactured the Pedrick name has been intimately connected with them, and this association has been the means of making every improvement that is in evidence today on our type of machine.

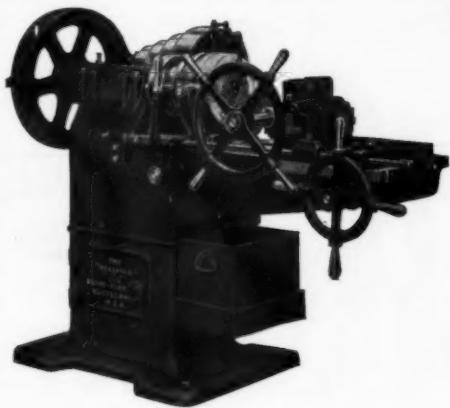
For convenience, accuracy and durability you will find our equipment more than satisfactory and capable of saving time and money in such measure that the cost is largely returned at every using.

*Write for a bulletin on this tool and our others:*

Pipe Benders, Portable Millers, Crank Pin Turners, etc.

**Pedrick Tool & Machine Co.**

3644 N. Lawrence St., Philadelphia, Pa.

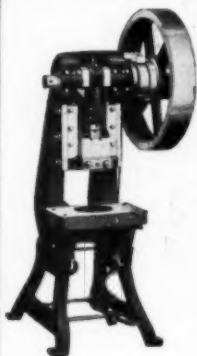


## Reliance Bolt Cutters

Built in sizes  $\frac{3}{4}$  inch to 6 inches, Single, Double and Triple, of the most up-to-date design. There is, also, a good reason why the "Reliance" is such a satisfactory machine for accuracy of threads cut, large production and low cost of maintenance, even in the hands of inexperienced labor. A lot of this reason is in the Opening Die Head, and we would like to tell you all about it. Interesting information for the asking.

**The Foote-Burt Co., Makers**  
Cleveland, Ohio

## Increased Earnings



Come From Increasing The  
Volume of Your Output

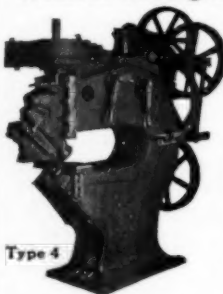
HIGH DUTY  
**ROCKFORD**  
PUNCH PRESSES

Give maximum work output  
with least power consumption.  
Greatest speed of operation.  
Least expense for upkeep.

*Write today for complete  
construction details.*

**The Rockford Iron Works**  
Rockford, Ill.

## Cuts Irregular Curves, Discs or Circles Without Cutting in from Side of Sheet



Type 4

Type 4 "Quickwork" Rotary Shear cuts  $\frac{3}{4}$ -in. thick steel and lighter to  $\frac{1}{2}$  in. radius in reverse curves, or 9 in. diameter hole. Follows any serpentine or sudden changing lines on one passage. Leaves metal true and flat. This

### "Quickwork" Rotary Shear

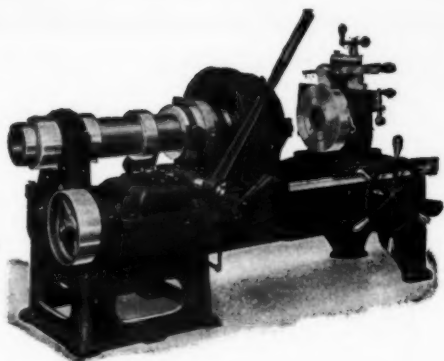
has three changes of speed, instantly controlled by lever. Upper cutter raised and lowered by power. Depth of throat 30 in.—weight 4000 pounds. Saves 5 to 40% stock. Saves 90% labor.

"Quickwork" Rotary Shears are made to cut 16 gauge to  $\frac{1}{2}$ -in. steel. Sold on trial—fully guaranteed.

*Write today for sample cuttings,  
complete descriptions and prices.*

**H. Collier Smith** 816 Scotten Ave.,  
Detroit, Mich.

Makers of the "Quickwork" Line of Metal-Working Machinery



## ***So Easy***

### **With B. & K. Power Pipe Machines**

Ease usually denotes strength and mastery. B. & K's have ample power for all pipe threading and cutting requirements, and the convenience and speed to increase capacity—therefore they compel economy.

B. & K's are well built and may be handled without gloves. Being fitted with the famous Peerless Adjusting Mechanism, they are adjustable to the thousandth of an inch without the use of tools. Nipple holders will not injure threads; chuck jaws are readily sharpened without drawing temper. They handle pipe from  $\frac{1}{4}$ -in. to 18-in. in diameter.

*17 Styles and Sizes Give Excellent Choice  
Send for Catalog and Ask Questions*

**Bignall & Keeler Machine Works**  
Edwardsville, Ill.

## Dalton High-Grade 6" Lathe



DON'T go after birds with a cannon, and don't do your small work on big lathes. Both are wasteful.

### The Dalton 6-Inch

does the finest and most accurate work within its capacity, with ample strength for operations that generally are taken to larger lathes. It is a

### Manufacturing Lathe

for machining small parts in quantities, with the accuracy for tool room and precision work.

Furnished with various mountings, and for belt or motor drive or foot power.

Write for Bulletin B-600

**Dalton Machine Company, Inc.**  
1901-1915 Park Ave., New York, N. Y.



## Enlist

Enlist in the army of happy shop owners who have found by installing **Grant Noiseless Riveting Machines** that their output is increased—that their product has a higher quality finish.

An army of **Grant Noiseless Riveters** may be operating at the same time without noise or vibration.

All rivets are highly polished and perfect. Machines will rivet both tight and loose.

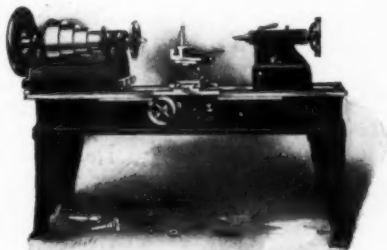
*Send samples and let us show you what a  
GRANT Riveter can do for you.*

**Grant Mfg. & Machine Company**  
C. E. Station, Bridgeport, Conn.



# Patternmakers' Lathes

## With Iron Beds



We are pioneers in making these machines, and we have improved them up to the minute. They are made to meet the peculiar requirements of pattern-making, and they do meet them so completely that these Iron-Bed Lathes have come to be universally regarded as the standard by which others are measured. This preeminence was not gained without infinite pains-taking, nor is it held without vigilant care. Every lathe must be a masterpiece—and it is.

We make eight sizes, 10, 16, 18, 20, 24, 30, 36 and 42 inches belt or motor driven.

Our line of Engine, Turret and Extension Gap Lathes is similarly complete, and the machines are in all respects as dependable and satisfactory. One of our Lathe Turrets will transform your engine lathe into a very satisfactory turret machine at a cost that is hardly more than nominal.

*A line will bring you interesting facts about any of these or all of them. Won't you write it now?*

**Fay & Scott, - Dexter, Maine**

# Have You a DAVIS KEYSEATER?

Then You Need

## CUTTERS

Keep your stock up and keen cutting teeth on your saws. Good tools mean good work. Our department is equipped to make all sizes of cutters for our machines, Carbon or High Speed Steel.

$\frac{1}{8}$ "  
to  $\frac{5}{8}$ "  
Cutters

for No. 2  
Keyseater,  
 $\frac{1}{8}$ " to 1" for  
No. 1 Keyseater.

Made from best  
grade steel, finely  
tempered, and good  
for long service. Be-

sides furnishing new  
blades we make a prac-  
tice of RESHARPENING  
used cutters at nominal cost.

Cutters 16" to 30" long for cut-  
ting keyways in gear blanks,  
pulleys, bell cranks, handles and  
all small work that can be done  
quickly and economically in any  
well equipped shop.

**PREPARE for BIG BUSINESS!**

Bushing holders fur-  
nished in four sizes to  
take bushing for any  
sized cutters required.

*Samples with machine.*

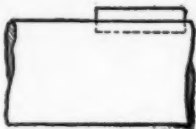


*Write now for Information*

**The W. P. DAVIS MACHINE CO.,** 311 St. Paul St.,  
Rochester, N. Y.



**"Whitney" Key**



**The Old Way**

## ***Why Put Up With The Old Way?***

Why stick to the old, costly, inefficient, unmechanical and dangerous way of keyseating when there is a better?

## **"Whitney" Keys and Cutters**

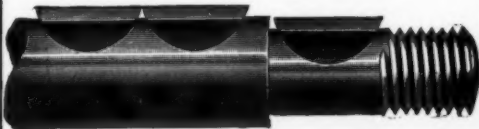
abolish all the trials and annoyances incident to former methods. Note these superiorities:

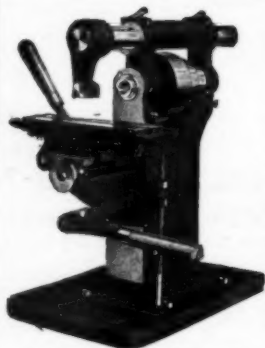
1. Key is set firm and deep and can not roll out when shaft meets sudden jerks and jars.
2. Key is not placed at end of shaft, making it unnecessary to turn the shaft down to level of the bottom of the seat, when a nut is put on the end of a shaft.
3. Keyseating done by ordinary labor. No skilled labor required.
4. It's done more rapidly.

*Send for Catalog No. 10*

**The Whitney Mfg. Co.**  
Hartford, Conn.

**Chains—Keys—Hand Milling Machines**





## Burke's No. 3 Bench Millers

### Are Seasoned Tools

Our system of tests insures accuracy, and our methods of construction make it permanent. Frames and parts are carried 6 to 8 months, after work begins on them, before the completed tools receive our final O. K., and all parts are finished and fitted with exceptional care.

Longitudinal feed, 6 in.; traverse feed,  $3\frac{1}{2}$  in.; vertical motion of knee, 8 $\frac{1}{2}$  in.; table surface,  $3\frac{1}{2}$  x 12 inch.

*Write for Catalog, which also shows larger and smaller sizes.*

**The Burke Machine Tool Co.**  
Conneaut, Ohio

## Rockford No. 3 Hand Miller

**With Longitudinal Power, Screw or Lever Feed  
Vertical and Transverse Hand Screw Feed on Column**



**Range of Feeds  
11" x 4" x 6 $\frac{1}{4}$ "**

This miller, with attachments, is very complete. The alignment is perfect, and it is just the thing for close work. It is stiff, powerful, convenient, and carefully built for lasting accuracy.

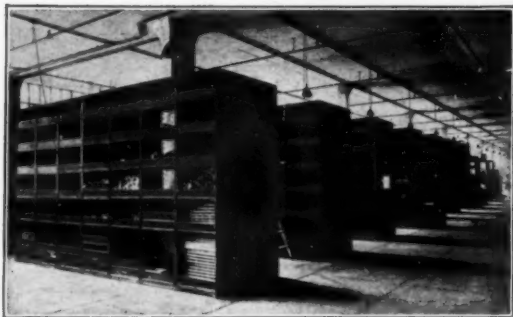
*Write for folder, showing several views and attachments--also for description of other sizes desired.*

**With Dividing Centers**

**ROCKFORD MILLING MACHINE CO., Rockford, Ill.**

# Terrell Steel Factory Fixtures

Save in So Many Ways



They save room—25 per cent greater capacity with the same floor space.

They save time—material is better kept and is handled in and out with less trouble.

They save insurance and reduce fire hazard.

They save cost of upkeep and they last forever.

Our interchangeable unit system permits our engineers to adapt Terrell Steel Fixtures to your space and requirements to the best possible advantage. You can have open bins and shelves, or closed and locked compartments, according to your needs.

Their first cost is so little more than for clumsy and unsatisfactory wooden fixtures that it may surprise you—and then the saving begins.

*Complete information and expert advice are  
at your service without cost or obligation*

## Terrell's Equipment Co.

Hall & Division Streets,

Grand Rapids, Mich.

## Yes, Accuracy is Guaranteed With Dickow's 10-Inch Universal Index Centers

We are originators of design. You save from \$40. to \$90. on first cost, and many times that by their simple construction. Any ordinary workman can operate them.

**Price Only \$85 Net,**



**F. O. B.  
Cars  
Chicago**

**Get the Original—Don't Experiment**

*Sold by all dealers. Write today for particulars.*

**Fred. C. Dickow, 35 So. Desplaines St., Chicago, Ill.**

## In A Class By Itself

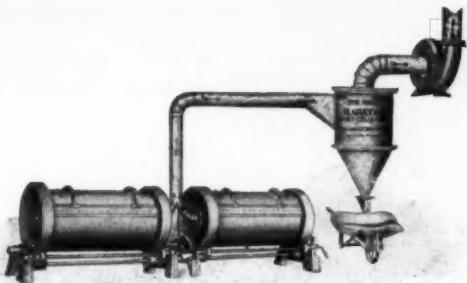


Is our New Model Bench Miller; because, we furnish with the machine our Quick operating Lever Vise, also Index Centers and two speed friction countershaft.

*Send for circular*

**The Carter & Hakes Co.**  
**West Winsted, Conn., U. S. A.**

AGENTS—for New England and New York, Hill, Clarke & Co.  
WESTERN AGENTS—Marshall & Huschart Machinery Co.,  
Chicago, St. Louis, Indianapolis.



## Morse "Rarefied" Dust Collector

Uses Less Power—Reduces Repairs



AND WITH THE SAVING in power and repairs goes an increase in efficiency. The Morse does thorough work with dust of all sorts—from emery wheels, sand blasts, tumbling mills, etc. No matter how heavy, gritty or cutting the dust, it makes good and saves money over other styles of collectors.

There is no abrasion of fan parts, and very little wear from internal friction—the dust is collected and automatically discharged before the air reaches the fan.

*Send for extensive list of users  
Our Booklet explains in detail*

**The Knickerbocker Company**  
Jackson, Mich.

## The "RHODES" A Combined Shaper and Slotter

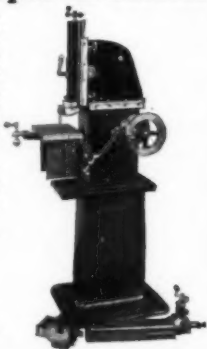
One of the handiest and most profitable machines on the market—designed especially to handle small work, for making tools, dies, models and shaping and slotting all classes of light work. A machine with all the essential features of larger machine tools, handy and productive on its own classes of work, at a purchase price so low that any shop can profitably afford to own it.

The "Improved Rhodes", as shown, is fitted with Vertical Attachment, which widens the range and makes it a practical vertical and horizontal machine in one.

Rigid, well made, accurate in production and durable in service.

*Send for more complete specifications, price, etc.*

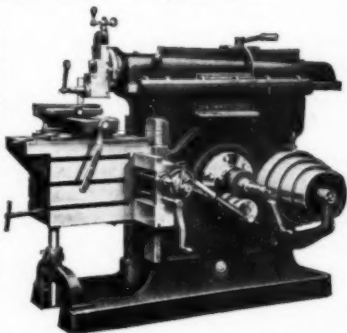
**Rhodes Mfg. Co.**  
Hartford, Conn.



## SHAPERS

12", 14", 16"  
Plain Crank,  
16", 20", 25"  
B. G. Crank,  
either Cone  
Driven or  
through  
Speed Box.

24", 28", 32"  
Geared  
Shapers of  
the Belt Shift  
type.

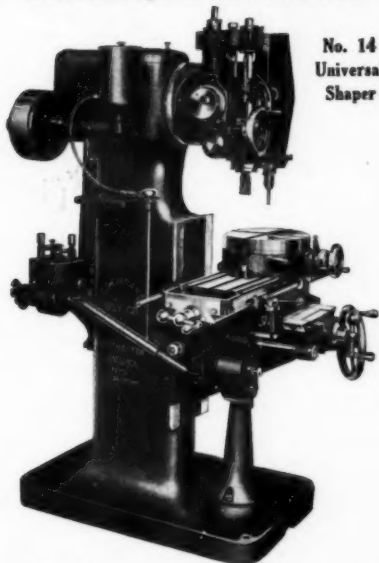


**The Smith & Mills Co.** Station B.,  
Cincinnati, O., U.S.A.



# A Universal Precision Machine

Of Especial Economy and Accuracy  
In Die Making and Tool Room Work



No. 14  
Universal  
Shaper

AT ONE CHUCKING it performs many operations which heretofore have required various machines and several settings. While that one feature alone removes the cause of most inaccuracies, this machine does even more, for it accomplishes these results with a refinement of accuracy that makes most or all hand filing unnecessary. It bores, mills, reams, shapes or drills at any angle, and it combines precision with adaptability and economy to such a degree that no up-to-date tool room should be without it.

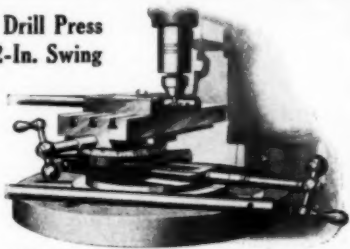
*This isn't half the story. For the rest, write to—*

**Cochrane-Bly Company**  
Rochester, N. Y.

## Ready to Mill in Two Minutes

On Any Drill Press  
14 to 42-In. Swing

A Great  
Convenience  
For Any  
Modern  
Machine  
Shop

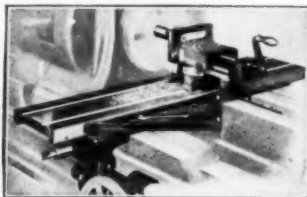


### The Davis Milling Attachment and Compound Table

Attached to an ordinary drill press it will do most of the lighter milling as well as a big machine. Cuts keyseats, straight, taper or half-moon; clutch jaws, slots, grooves, cams, anything that a small plain miller will do. Simple, easily attached, durable and effective. Cost small; usefulness unlimited. Catalog and price on request.

**Hinckley Machine Works, HINCKLEY, ILL.**

## Milling and Gear Cutting on Your Screw Cutting Lathe



This is an easy operation with the Mafreto attachment, which does all a plain miller will do, and has a range and capacity equal in effectiveness to much higher cost machines. Complete with power, hand worm and lever feed, two sets of elevating blocks, indexing plates, swivel vise, driving dog, cleats and gibs.

*Simple, Inexpensive, Good. Write for Details.*

**Mafreto Machine & Tool Co.**

53 Gardner St., Worcester, Mass.

We also make Hand and Power Punches and Shears

# Here Is the Jack of Jacks

It contains all of the good points of the old style jacks increased 1,000 per cent by the wonderful new features. Lifts anything in any position. Pulls, pushes, lifts. Pivots on the base. Chain grips in the cap.

Factory superintendents, engineers, mechanics—all who have seen this jack—pronounce it the greatest general utility tool ever built.

## SIMPLEX JACKS

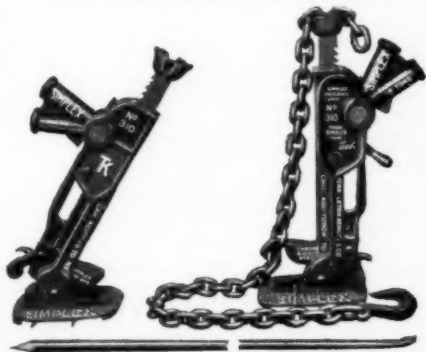
The jacks that stand for absolute safety. Let us send you circular describing this wonderful tool. Your own experience will tell you a thousand uses for it. Write for prices.

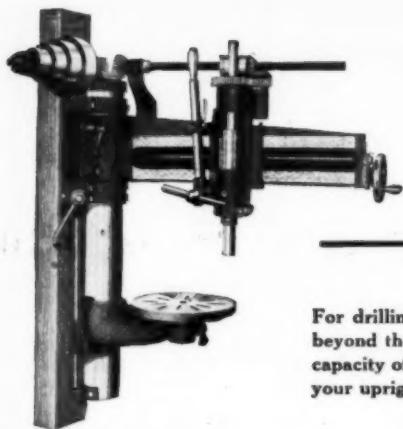
**Templeton, Kenly & Co., Ltd.**

*Established 1899*

Manufacturers exclusively of Simplex Jacks for Automobiles, Railroads,  
Agricultural and all classes of industries

**1012 South Central Ave., Chicago, Ill.**





For drilling  
beyond the  
capacity of  
your uprights

## **A Wide-Range Drilling Machine At a Very Moderate Price**

A wall or post machine, with either 2½ or 3½-ft. arm, which is equal to any upright for ordinary drilling, besides doing the work that requires the longer reach of the radial. Both arm and drilling head lock securely in any position; spindle has quick return hand lever in addition the regular hand feed lever; has four-step counter, with self-oiling bearings, and gear guards (not shown in cut).

A strictly high-grade tool, fully guaranteed, at a much lower price than a floor radial can be made and sold for.

*Want full description? Send your name and address to—*

**Canedy-Otto Manufacturing Co.**  
Chicago Heights, Ill.

# The "Barnes" Drills

8 in. to 50 in. Swing



OUR POSITIVE  
FEED "makes 'em  
talk," and why  
shouldn't it? Simple  
and Strong; been on  
the market since year  
1903 (not new and  
untried); gives best  
of satisfaction, and  
will feed a drill or  
boring bar without  
a slip or hesitating  
movement.

*Send for  
Drill  
Catalog*

**W. F. & Jno. Barnes Co.**  
22 Ruby Street, Rockford, Illinois

## Quick In Response To Control

The Gang Radial Drill conserves the operator's time and increases the effectiveness of his efforts. Hence it is a saving and profit-making tool, with special features that commend themselves to men who know machines because of their simplicity and practical value.



An Interesting Catalogue at Your Service. Write for it.

**THE WM. E. GANG CO.**  
Cincinnati, O.

## A Lot of Drilling Capacity For \$70.

This 16-inch, No. 7 Barr is a sturdy, reliable, highly efficient sensitive that will give you more service and satisfaction than you have ever bought for so small a sum. Takes drills up to  $\frac{3}{4}$ -inch, and handles them effectively. It gets results.

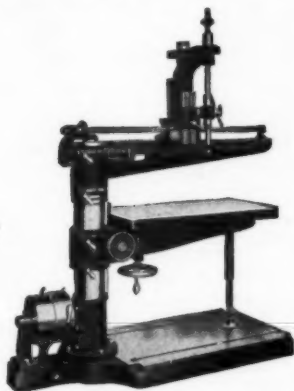
*Let us have your address for complete description.*



**Reed Drill Co., 43 Hammond St., Worcester, Mass.**

# Taylor & Fenn's Fast Radial

Cuts drilling costs for manufacturers and others  
drilling holes up to  $\frac{3}{4}$ -in. in big, heavy pieces



THE MACHINE is a 3-foot sensitive radial of unusual convenience, hence its great success in lowering shop costs. By applying drilling heads of different types it can be made to cover nearly all drilling requirements within its range. A gear box on the back of the drilling head gives three spindle speeds. Besides, it has all the desirable features of our standard line.

THE RESULTS are that many customers have doubled and even trebled their output, without any increase in labor cost.

*Cost records and full particulars on request*

**The Taylor & Fenn Company**  
Hartford, Conn.

## Quick, Accurate Tapping

With "M. E. C." Collapsible Taps

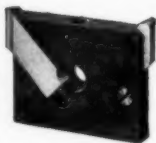
Users say "M. E. C.'s" increase their output from 30 to 50 per cent. They stand up to the hardest jobs day after day and week after week. They succeed where others fail. Free trial for 30 days.

Made in 11 sizes from 15-32 in. to 3 in. straight threads, including  $\frac{1}{4}$  in. to 2 $\frac{1}{2}$  in. iron pipe sizes.

**Manufacturers  
Equipment Co.**

Lake & Jefferson Sts.  
Chicago, Ill.

We also manufacture various styles and sizes of "M.E.C." Air Chucks & furnish complete equipments of tools for brass & iron manufacture.



**The Production Boss**

**"Don't Care A Cuss"**

What make or kind of tool he uses—he wants **SERVICE**; he must have **continuous PRODUCTION**.

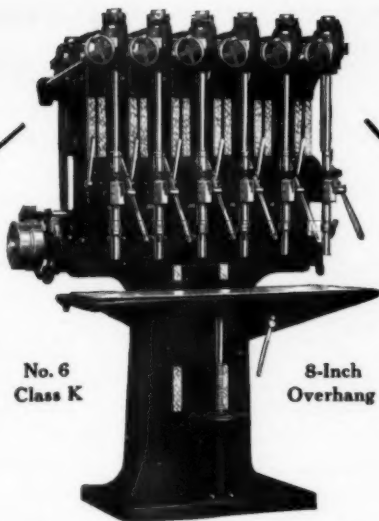
## SHRAPNEL Tools

**The Kelly Adjustable Kind**

**THE KELLY REAMER CO.**  
CLEVELAND, OHIO, U. S. A.

C. W. Burton Griffiths & Co., London, English Agts. 40 Domestic Agencies





**No. 6  
Class K**

**8-Inch  
Overhang**

## ***A Good Reason***

### **For Henry & Wright Drilling Supremacy**

A drilling machine is made for the purpose of converting power and speed at the shaft into power and speed at the drill point, and to hold the work in proper relation to the drilling tool.

One reason why the Henry & Wright is the superlative drilling machine of today is that its gearless power transmission system, with frictionless bearings, is the most effective method yet known for converting simple power into drilling efficiency.

*Write for particulars, proofs and prices, and for our  
Special Chart of Drilling Feeds and Speeds—free*

**The Henry & Wright Mfg. Co.**  
**760 Windsor St., Hartford, Conn.**



## Burke Quality

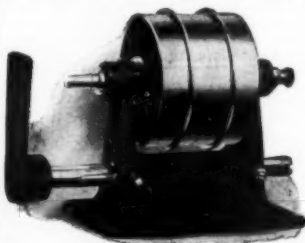
## Excels on Fine Points

**Machines of  
Burke Quality**  
are never built  
with any name  
cast on the  
frame but our  
own—

**BURKE  
CONNEAUT  
U. S. A.**

**For Sale Everywhere**

## **This Tapping Machine Now Has Greater Capacity**



**Burke's**  
**No. "D" Taps**  
**5/8" Holes**  
**in**  
**Horseshoe**  
**Steel**

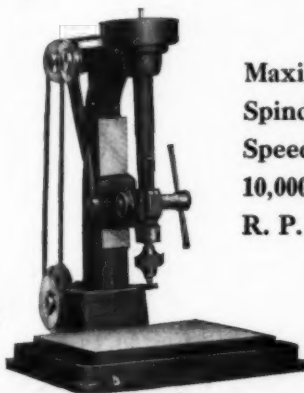
**BUILT** throughout with exceptional care, our several sizes give service in proportion. Accurate, rapid and convenient, they give solid satisfaction. No. "D" sells for \$35.

**Send for details today.**

**The Burke Machine Tool Co.,** Conneaut, Ohio

# Save Money

with this  
**High Speed Drill**



Patents  
Pending

**Maximum  
Spindle  
Speed  
10,000  
R. P. M.**

**Double Your Production on Holes  
up to  $\frac{3}{8}$ " in diameter**

This machine is carefully and accurately built to give the greatest service. Equipped with Hess Bright Ball Bearings throughout.

*Ask for Bulletin No. 502*

**Leland-Gifford Co.**  
**Worcester, Mass., U. S. A.**



## **Cheap, Quick Cutting**

High speed or other hardened steel, brass, copper aluminum and all other metals, or wood and metal combined.

### **Peter Bros. Ball Bearing Abrasive Metal Cutter**

Cuts smoothly, saves waste of material and time, and is altogether the most satisfactory cutting method yet devised.

**8" Size, \$16.50, with C. S.**

Splendid for tool room. Cuts high-speed steel up to  $\frac{1}{2}$ " square.

**12" Size \$42, with C. S.**

Cuts up to  $2\frac{1}{4}$ " diameter, round or square, at any angle up to 45 degrees.

**15 Days' Free Trial**

Write us or ask your dealer

**PETER BROTHERS MFG. CO.**  
115 Railroad St., Algonquin, Ill.



## **AUTOMATIC HIGH SPEED SAW**

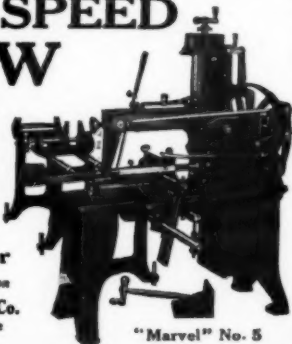
Attention is invited to the "Marvel" No. 5

Cuts duplicate pieces faster and at less cost than any other method. Entirely automatic.

**Feeds the Bar**

Write for full information

**Armstrong-Blum Mfg. Co.**  
341 N. Francisco Avenue  
Chicago, Ill.



"Marvel" No. 5

# The Newly Improved Racine High Speed Metal Cutting Machine

No. 2A—Bull Dog Type—Eats Steel



**"It's a Wonder. We've Junked our other Machines"**

That is what one concern wrote to us when, after 30 days free trial, they paid for their Racine High Speed Metal Cutting Machine.

Judge the Racine by the work it does, by its speed, the saving you make and the quality of the work it turns out. It has from 5 to 10 times the capacity of an ordinary hack saw. Has a system for lubricating the blades and lifting them on the return stroke which saves the blades and increases the output.

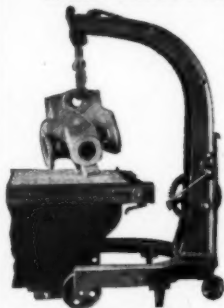
*Take one on 30 days' trial. If it does not make good send it back. Write for details—now.*

**Racine Tool & Machine Co.**

1500 Junction Ave. S., Racine, Wis., U.S.A.

# Lift the White Man's Burden

With a Canton Portable Crane and Hoist



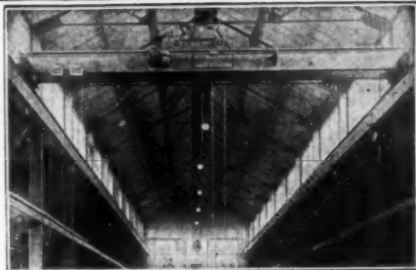
It isn't good business to use human muscle to do work that can be done better, quicker and cheaper with an inexpensive machine.

## "The Handiest Tool In the Shop"

takes the place of from six to ten men lifting and lugging heavy objects in your shop—and it is *safe*. Furnished with double gears, if desired, at small extra cost.

*A big economy—don't miss it  
Free trial for 30 days and nights*

**CANTON FOUNDRY & MCHE. CO., Canton, O.**



## Floor Operated Electric Traveling Cranes

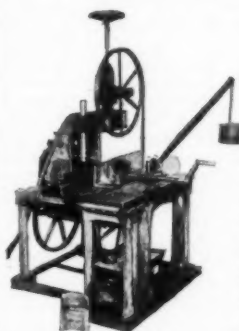
do not require an operator in constant attendance and are frequently as well or better adapted for handling material than the more expensive cab operated.

We make all types of overhead cranes and hoists.

**The Euclid Crane & Hoist Company**  
Euclid, Ohio

# A New Metal Band Saw

For Cheap and Exact Cutting



$\frac{1}{8}$  to 8-inch Round

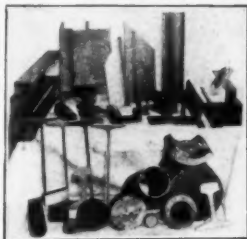
8-inch Square

8-inch I Beam

Tubing and Light Material

The continuous cut of the band saw gives it peculiar effectiveness without the waste of power and time unavoidable in a reciprocating machine. Its simplicity in construction and operation make both cost and operating expense low, while its accuracy adapts it to work ordinary hack saws cannot handle satisfactorily. It spells econ-

omy in time, labor and material on any cutting-off within its limits—8 inches round or square and 20 inches long. Especially suited to cutting off gear blanks from the bar, and in handling tubing and light material, which it cuts very fast. One operator can run a number of machines.



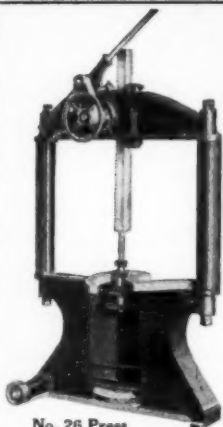
The cost of blades is from one-half to one-quarter as much as hack saw blades doing the same amount of work.

*Don't fail to investigate. Write today  
for description and price.*

## H. C. Williamson

1840 West Lake St.,

Chicago



No. 26 Press

## Efficient Equipment

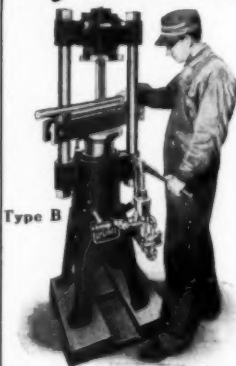
For driving mandrels, bending and straightening, broaching, embossing with dies, setting bushings and many other every day manufacturing jobs, there is an *Eames Press*. All sizes for all purposes requiring centering capacity up to 38" and pressure up to 25 or 30 tons.

*It will pay you to investigate.*

**Atlas Press Co.**

313 N. Park St.,  
Kalamazoo, Mich., U. S. A.

## Hydraulic Arbor Presses



Type B

Many styles—Many sizes  
for

**Many Purposes**  
**Hand or Power**

To force pulleys and gears on  
and off shafting.

To bend or straighten shaft-  
ing or bars.

To punch or form metal.

**Lowest Prices**

ever made on hydraulic presses.

**Rapid movement**

**Heavy Pressure**

Write your needs and we will tell  
you what we can do.

**Lourie Mfg. Co.**

Springfield, Ill., U. S. A.

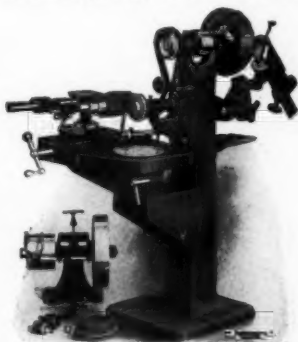


**This is An Inexpensive  
Cutter, Reamer and Drill Grinder**

**It has Generous Range and Capacity  
The Price is Within Your Reach**

**Don't delay—look it up now!**

**Particulars, prices, etc., sent on request.**



**Style BX**

**We also make**

**Drill Grinders—Surface Grinders—  
Lathe Center Grinders—Universal  
Grinders—Tool Grinders—etc.**

**Wilmarth & Morman Co.**

**1185 Monroe Ave., Grand Rapids, Mich.**

# Combination Disc Grinder & Roll Sander

**"Best machine ever built for pattern shop use"**

**Patented**

The No. 20 Gardner combines both the disc wheel and the sanding roll into a compact, sturdy and accurate machine. The disc wheel is used for producing flat surfaces and external curves; the sanding roll perfects internal curves which have been roughed out on a band saw.



Both this disc wheel and the roll remove stock with extreme rapidity and accuracy. With this machine at hand your apprentice boy can do, with greater speed and quality, much of the work formerly done by your best man. A Gardner No. 20 soon pays for itself in any modern pattern shop working four or more men.

*Get the details today*

**Gardner Machine Co.**

*The Disc Grinding Authorities*

**Beloit, Wisconsin**

**Largest Disc Grinder Builders in the World**

# A Complete Grinding Outfit



*Greenfield*

## Universal Grinding Machine

is an all-around tool room machine. It is not only suitable for sharpening all sorts of machine shop tools but is furnished with attachments for cylindrical, internal and flat work.

All the odd jobs of grinding that constantly arise in tool and jig making may be accomplished on this machine quickly and accurately,

**It sells at a price within  
the reach of every shop.**

Get acquainted with this tool before you buy; probably we can tell you of satisfied users right in your locality.

*We also build Plain Grinding Machines for production work*

**Greenfield Machine Company**  
Greenfield, Mass., U. S. A.

# Partridge No. 22 Grinding a

Furnished as a Double-End Emery Grinder, as a Double-End Taper Grinder, or as an Emery Grinder and Polishing Machine.



These are good tools at a low price. They are safe, efficient and the product of properly selected materials and careful workmanship.

The spindle is vanadium steel, treated, lathe turned, threaded to size; the shafts are of larger size; the bearings are longer than found in this class of machines; the wheels are shrunk to the shaft and true to oval crown; the washers are true and true, the inside ones being and faced true for grinders and for polishers; the bearings are with a large reservoir filed for the inlet being a spring top cannot be left open.

The emery wheels can be protected by Partridge Patented Steel Guards, which are able to follow wear of wheel at bottom. They are real guards—no

*For particulars and prices of these "Good Tools"*

**E. O. PARTRIDGE, Manufacturer, 2039**

# ing and Polishing Machines

as a Double-End Polishing Lathe with detachable  
Polishing Lathe, also with detachable taper end.

tools at a moderate  
efficient and durable—  
erly selected material  
ship.

vanadium steel, heat  
threaded and ground  
of larger diameter and  
ger than are usually  
machinery; the pulleys  
ft and turned with an  
ers are faced parallel  
nes being shrunk on  
nders and left loose  
rings are ring oiling,  
filed from the side,  
top oil cup which

be protected with Part-  
ards, which are adjust-  
wheel at both top and  
uards—not makeshifts.

ood Tools at a Moderate Price," write to—

2039-49 W. Lake, St., CHICAGO, ILL.



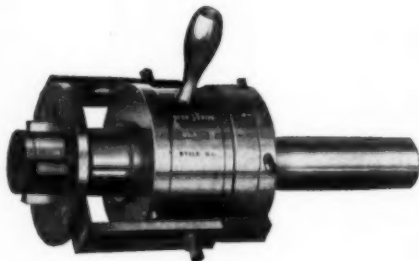
# We Fool Ourselves

When we say it makes a difference where  
an article is made.

What we are after is HOW it is made.

The Geometric Collapsing Taps are made  
for business—for your business, for  
our business, for their own business.

They are arranged for all classes of thread  
tapping above  $\frac{1}{4}$ -inch diameter. For use on  
Turret Head Machines or Live Spindles.

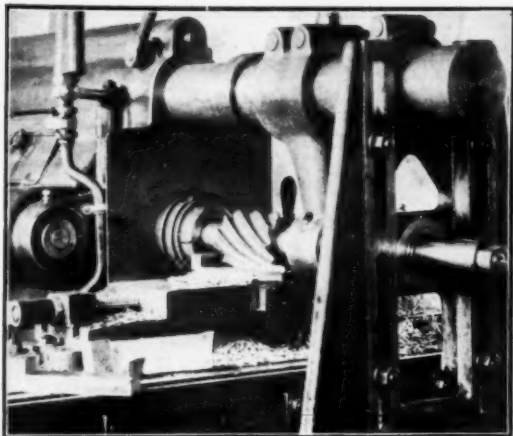


Get in touch with us. Don't spend time  
puzzling over your tapping proposition. Put  
it up to us, and our experts will tell you how  
to do it.

**The Geometric Tool Company**

New Haven, Conn.

Chicago Office, 545 W. Washington Blvd.



## The Efficient Combination

**B. & S. Coarse Tooth Milling Cutters on  
B. & S. Heavy Service Milling Machines**

On account of the free cutting action of our new line of Coarse Tooth Milling Cutters you can take deeper cuts, use faster feeds, do more work between grindings, drive the cutters harder with less danger of breaking teeth, and consume less power for amount of metal removed, on nearly all kinds of work than with previous styles. B. & S.



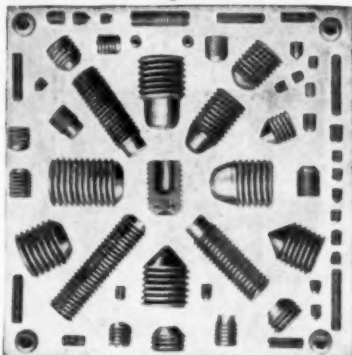
Heavy Service Milling Machines have the requisite power and rigidity to get full efficiency from these cutters. New, free Catalog 26 shows our complete cutter line.

A full stock of Cutters at our Chicago store, No. 626 Washington Blvd.

**Brown & Sharpe Mfg. Co.**  
Providence, R. I.

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## Allen Safety Set Screws



Send for circular No. 13 and sample screws (for testing).

**ALLEN MFG. CO., - Hartford, Conn.**

**You Can Cut Off A Lot Of Your  
Lathe Tool Expense By Using**

## Armstrong Cutting-Off Tools

**They Require No Forging; Minimum of Grinding;  
Mighty Little Tool Steel.**



STRAIGHT CUT-OFF TOOL

*Catalog  
sent  
for  
the  
asking*

8 Sizes, each Straight Shank, Right Hand Off-Set, Left Hand Off-Set.

**Armstrong Bros. Tool Co.**

"The Tool Holder People"

308 N. Francisco Ave., Chicago, U. S. A.

Our complete line is on exhibition in Block 41, Palace of Machinery, Panama-Pacific Exposition, San Francisco.

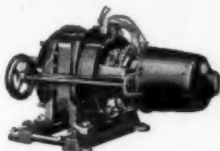




***Belt Shifting Eliminated  
In Wide Range of Lathe Work with a***

**KIMBLE**

**Adjustable Speed  
Alternating Current**



**MACHINE TOOL MOTOR**

*Let this letter be our advertisement:*

**C. STONE & SONS**

**AUTOMOBILE : : COACHWORK**

**1658-1674 Ogden Avenue**

**CHICAGO, ILL.**

Kimble Electric Company,  
Chicago, Ill.

April 29th, 1915

Gentlemen:—

In answer to your inquiry of recent date, we wish to say that the Kimble adjustable speed, single phase, alternating current motor, which operates our 16-inch Hamilton lathe, has given excellent service.

The lathe serves our automobile service department, and is used for turning out a great variety of work, ranging from the smallest bushing to the heaviest shaft. With the ordinary type of motor, this would necessitate a great deal of belt shifting, with the attendant danger and loss of time. This has been entirely eliminated through the use of your adjustable speed, single phase motor, because the motor speed can be varied through an extremely wide range without loss of power. We might add that we were somewhat surprised by the manner in which the motor sticks to its set speed, even under heavy load.

The cantilever mounting, furnished with the motor, adapts the motor readily for direct connection with a lathe, and certainly should prove successful for lathes which are too light for the direct weight of the motor.

Yours truly,

**C. STONE & SONS.**

This is the only adjustable speed A. C. Motor ever built.  
It has been in successful use over 2 years.

**Built in 1-6 h. p. to 2½ h. p. sizes, all  
equipped with S. K. F. Ball Bearings.**



*Send for our Catalog*

**Kimble Electric Company**  
**2409 W. Erie Street, Chicago, Ill.**

## Steel Handles



**For Power Tools, etc.  
We can save you money.**

*The Price*, on account of quantity production, is below the manufacturing cost of cast iron or forged handles.

*In Quality* there is no comparison. They are accurate, highly finished, and ready to attach. Let us show you.

*Write for Catalog of Standard Handles, prices and discount.*

**The Cincinnati Ball Crank Co.**  
Oakley, Cincinnati, Ohio



## Find Out!

### Vulcanized Fibre for Machine Parts

may be much better and cheaper than the materials you are using, and it's worth investigation.

***Let us figure on these parts for your machines:***

Gears  
Frictions  
Washers

Bushings  
Thrust Washers  
Guide Collars

Discs  
Handles  
Etc., Etc.

***Or send us blue prints or samples of special parts.***

Write for Catalog, which tells the story of the original Vulcanized Fibre and its uses, and contains price list on stock parts, sheets, tubes and rods.

**American Vulcanized Fibre Co.,** Wilmington, Delaware.

# Drilling Holes

In Steel or Wood  
Can Be Done With

*Thor* Electric  
Drills

At  $\frac{1}{5}$  The  
Usual Cost



Nearly every factory has more or less drilling either in manufacturing or repair work. With a *Thor* Electric you can turn the work out in  $\frac{1}{5}$  the time usually required. Shipped on 10 days' trial free.

ORDER TODAY

*Ask for Bulletin HE-2*

Independent Pneumatic  
Tool Company

Chicago      New York      Pittsburgh      Detroit  
San Francisco      Atlanta      Montreal

## Accurate Steel Bearing Balls



In Sizes  $\frac{1}{8}$  to  $\frac{1}{2}$ -Inch

Abbott Steel Bearing Balls, produced on our highly perfected special machinery, are unsurpassed in finish, accuracy and uniformity. We shall be glad to figure on your requirements, in any grade or quantity, and to demonstrate to you the excellent quality of Abbott Steel Balls.

### The Abbott Ball Company

Elmwood District, Hartford, Conn.



I am in close touch with one of the most complete Manufacturing Machine Shops in the country.

Let me secure estimated cost of manufacturing any Special Machines, Jigs, Tools, Fixtures, etc., or for any machine work where accuracy is required.

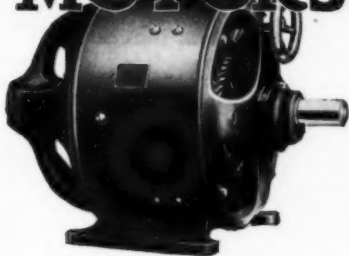
**J. C. Hitchcock**

600 West 192nd Street, NEW YORK

# RELIANCE

## ADJUSTABLE SPEED

# MOTORS



These motors run at any speed over any range up to 1 to 10. For instance, with a 2 h. p. motor having a speed range of 400-1600 r. p. m., you get any imaginable speed within these limits.

No electric controller is used for changing the speed. Just turn the handwheel to get the right speed to suit any job.

Reliance Motors will keep your machines at a top-notch production rate on all kinds and sizes of work.

*Get the details in Folder 10 L.*

(We build constant speed motors.)

**Reliance Electric & Engineering Co.**  
1050 Ivanhoe Road, Cleveland, C. O.

# Tucker's Safety First



Closed

**Oil Hole Covers**  
Require but one hand to pump in the oil. Adapted to all kinds of mechanism having oil holes leading to a bearing.

*Send for Catalogue  
Oil Hole Covers  
and Compression  
Grease Cups*



Open  
Style A



Style C



Style E

Style F, Drive



Style D

Compression  
Grease Cup

Style B



Open



Closed

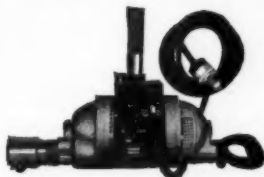


Rotary Head

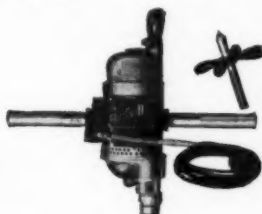
**W.C. & F.C. TUCKER, Hartford, Conn.**

# Universal Motor Drills

For Use On Either Current



This drill is made in 3-16",  $\frac{1}{4}$ ",  $\frac{3}{8}$ " &  $\frac{1}{2}$ " size. Gears run in grease. Motor air cooled, and is made to stand hard service. Sent on trial.



## 0 to $\frac{7}{8}$ Universal Drill

The motors used in these drills are Westinghouse motors, and operate on 25, 30, 40 or 60 cycle. 110 or 220 volts.

**The U. S. Electrical Tool Co.**  
Cincinnati, Ohio

NEW YORK, 30 Church St. CHICAGO, 549 W. Washington Blvd.  
BOSTON, - 12 Pearl St. ST. LOUIS, - 610 Commercial Bldg.

Stock carried at branch offices.

# Pattern Shop Machinery

Special Prices if you refer to this ad.



## Band Saws

Chicago No. 00 27 in. Wheels  
 " No. 0 32 " "  
 " No. 1 36 " "



## Saw Tables

Chicago No. 5 Stationary Table  
 " No. 9 Tilting Table  
 " No. 10

Boring attachment if wanted.



## Jointers

8 in., 5 and 6 ft. tables and guard.  
 12, 16, 20, 24 and 30 in., 7 ft. tables  
 and guard.

Trimmers, Lathes, Core Box Tools, etc.

*Ask for full descriptions*

## Chicago Machinery Exchange

1214-1228 Washington Boulevard, Chicago

## Steel Die

# Embossed Stationery

looks like solid prosperity. The psychology of creating a favorable impression by mail must necessarily include impressive stationery—neither cheap nor showy—just neat and rich. For that purpose our Steel Die Embossed Stationery is unsurpassed.

*It is probably not as expensive as you think*

*Ask for free Specimen Book and Prices*

## American Embossing Co.

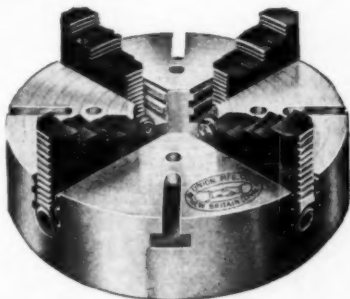
192-96 Seneca St.,

Buffalo, N. Y.



# Union <sup>Iron Body</sup> Independent Chucks

*—are easily recognized.* You can tell them by the double bearing ribs for the jaws, which are a distinctive feature in the *Union Chucks.*



Mechanics are specifying the "Independent Chuck with the *double ribs*," showing that they appreciate that feature. There are other good points, such as the hardened steel thrust bearings for the operating screw, and the square hole for wrench.

The chuck is as stocky and strong as an iron body chuck can be made.

## Union Manufacturing Co.

New York Office,  
26 Cortlandt St.

New Britain, Conn.

Makers of a Complete Line of Chucks

## What Do You Think About It?



Patented Sept. 16, 1902

More than 183,000 Jacobs Improved Drill Chucks have been purchased. Our customers of 1903 have since continuously and increasingly purchased Jacobs Improved Drill Chucks. More Jacobs Improved Drill Chucks were purchased during April, 1915, than during any previous month.

We think this record is the strongest possible evidence of the Jacobs Improved Drill Chuck's recognized merit, and our liberal, honorable dealings. What Do You Think About It?

*Our new illustrated catalogue sent upon request.*

**The Jacobs Manufacturing Co.**  
Hartford, Conn., U. S. A.

## "CUSHMAN" CHUCKS AND FACE PLATE JAWS

A new line of Chucks for Extra Heavy Service and Special Purposes. Both Universal and Independent.

**CUSHMAN BLUE LINE CHUCKS**  
(ALL STEEL)

*Write for Special Catalogue No. 38*

**The Cushman Chuck Co.**  
Hartford, Conn., U. S. A.

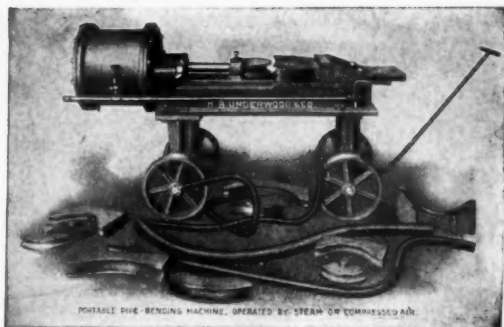
# **SWEETLAND CHUCKS**

## **In a Small Shop out in Indianapolis**

A "Sweetland" Chuck has been in use for nearly 30 years. It has been used for every sort of work. It has been abused because the owner of the shop for a long time had only this one chuck and he had to make it "do" for most every thing. And this "Sweetland" Chuck today is still in use giving good service.

A little booklet called "Chuck-ing for Profit" will tell you all about "Sweetland" Chucks. Write for a copy.

**The Hoggson & Pettis Mfg. Co.**  
New Haven, Conn., U. S. A.



## Reliable Portable Pipe Bender

Bends pipe cold, without filling, up to 2½" diam.

This handy machine, working on 80 lbs. steam or air pressure, puts a right angle bend in a 2-inch pipe in two minutes; does not flatten or split the pipe. The piston is forced back by a spiral spring, so that front head and piston rod require no packing. Dies are easily changed and adjusted. This efficient pipe bender is especially suited to the needs of railway and general repair shops.

### OUR LINE OF PORTABLES FURTHER INCLUDES

circular planer tools; radius planers; rotary planers; millers; machines for truing eccentrics, facing domes, arms for facing cylinder flanges; rotary flue cleaners; rail saws; armature and axle bearing borers; locomotive cylinder borers; crank pin turners; reflex water glass grinders; motors, etc.

*Economize with Portable Tools. Write for our Catalog.*

L. B. Flanders Machine Works (Est. 1870)

**H. B. Underwood & Company**

1016-22 Buttonwood St., Philadelphia, Pa.

## Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for.

Write directly to the parties offering the machines for sale for prices and full descriptions. If you do not find what you require, use the post card inclosed with each book to make known your wants to the publisher.

### FOR SALE BY

**J. L. Osgood,** - - - **45 Pearl St., Buffalo, N. Y.**

#### Bargain List.

Cutter grinder, Walker univ.  
Cutting-off mch., 4" Hurlbut & R.  
Drill, 1", 6-spindle adjustable.  
Lathe, 11"x5' Davis.  
Lathe, 14"x6' Prentiss.  
Lathe, 16"x6' Porter.  
Lathe, bench, No. 3 Stark, attach.  
Lathe, No. 4 Rivett, all attachments.

Oil separator, No. 1, A-1.  
Screw machine, No. 1 Garvin.  
Screw machine, No. 2 Garvin.  
Screw machine, No. 4 W. & S.  
Screw machine, 11-16" new Cleveland automatic.  
Screw machine, 2" Hartford auto.  
Tapping mch., 5-16" B. & S. horiz.

### FOR SALE BY

**Clark Machinery Co.,** **717 Frankfort Ave., N. W., Cleveland, O.**

Automatic, 1" Cleveland.  
Boring mill, 34" Colburn.  
Bulldozer, No. 4.  
Drill, 1-spindle Foote-Burt.  
Drill, 1-spindle Henry & Wright.  
Engine lathe, 14"x8' Cisco, c. r.  
Engine lathe, 16"x8' Porter, c. r.  
Eng. lathe, 20"x8' New Haven, c. r.  
Eng. lathe, 24"x10' New Haven, c. r.  
Eng. lathe, 24"x18' Schumacher-B.

Grinder, disc, No. 8 Besly.  
Keyseater, No. 0 Mitts & Merrill.  
Miller, universal, No. 3 LeBlond.  
Planer, 22"x24"x8' Gray.  
Screw machine, No. 1 W. & S.  
Screw mch., 1-1/2" Hartford auto.  
Shaper, 16" Smith & Mills.  
Spinning lathe, 22" Prybil.  
Turret, universal, No. 3 W. & S.  
Turret, 16" W. & S., b. g. and f. hd.

### FOR SALE BY

**Fred. C. Dickow,** - - - **35 S. Desplaines St., Chicago, Ill.**

#### PUNCH PRESSES.

No. 1 Robinson.....	\$ 40.	No. 2 Norton Bros.....	\$ 80.
No. 1 1/2 Robinson.....	60.	No. 30 Perkins incl.....	85.
Jones horn press.....	85.	No. 4 Weber incl.....	175.

#### TURKET LATHES AND SCREW MACHINES.

25" Lodge & Davis, power feed to turret, A.1.....\$150.  
No. 2 Warner & Swasey hollow hexagon turret, like new.  
2" Cleveland automatic screw machines, (10).

#### MISCELLANEOUS.

Grinders, motor drive speed lathes, 2 portable cylinder re boring bars,  
No. 1 Stiles punch press, hoists.

### FOR SALE BY

**Enterprise Machinery. Co.,** **521 W. Monroe St., Chicago, Ill.**

Band saw, 36", fine condition...\$ 70.  
Buffing lathe, with c. s..... 18.  
Die filer, cabinet pedestal, c. s. 28.  
Drill, 3/4" on pedestal, t. & l. pul., 6.  
Drill, 1" Barnes, b. g., p. l. 100.  
Drill, 3-spdl., lever feed..... 85.  
Drill, 18-spdl., P. & W..... 110.  
Grinder, hvy., c. s., 1 1/2" spindle, 20.  
Japanning oven, 6' x 6' x 6'..... 200.  
Lathe, 14"x6' LeBlond, 1 1/2" h.s., 180.

Lathe, 16"x6' hvy. p.c.f., c.r., h.s., \$195.  
Lathe, 16"x8' Bogart, p.c.f., c.r., 195.  
Lathe, 60" chg'g d.b.g., bor. bar, 50.  
Lathe, turret, 1 1/2" F. & K., h. s., 310.  
Miller, Lincoln, 12x8x5" P. & W., 60.  
Punch, 1/2" in d. b. g., arch jaw, 50.  
Punch or brake, 55" b. g., 190.  
Sand blast, guaranteed..... 200.  
Shaper, 16" American, crank..... 195.  
Surf. plates, 42x60", \$50; 24x36" 25.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Rumely-Wachs Machinery Co., 121 N. Jefferson St., Chicago, Ill.**

#### ENGINE LATHES.

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 12"x6' Davis.                    | 20"x8' Hamilton.                  |
| 13"x5' Champion.                 | 20"x10' American.                 |
| 14"x6' Von Wyck.                 | 22-30"x10' Greaves & Klusman, two |
| 14"x8' Bradford.                 | carriages.                        |
| 14"x8' American, q. c., taper.   | 24"x8' Putnam.                    |
| 15"x8' Schellenbach.             | 24"x24' Fifield.                  |
| 16"x6' Morris.                   | 30"x14' American.                 |
| 16"x8' Willets.                  | 30"x16' LeBlond.                  |
| 18"x8' LeBlond.                  | 36"x12' Schumacher & Boye.        |
| 18"x10' Rahn, Meyer & Carpenter. | 36"x16' Fifield.                  |

#### TURRET LATHES AND SCREW MACHINES.

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 30" Morse turret, chucking.       | 15" Bardons & O., Fox No. 3.      |
| 18" Lodge & Davis tur., chucking. | 14" Drees complete screw mche.    |
| 18" Springfield, Fox.             | No. 2 Bardons & O. 1" screw mche. |
| 18" American, Fox.                | No. 1 Pratt & Whitney screw mche. |
| 16" Pratt & Whitney turret.       | 4" Garvin screw machine.          |

#### UPRIGHT DRILLS.

- |                        |                                  |
|------------------------|----------------------------------|
| 16" Baker, heavy duty. | 22 1/2" Barnes, b. g.            |
| 20" Barnes, w. & l.    | 24" Cincinnati, sliding head.    |
| 20" Barnes, b. g.      | 26" Sibley & Ware, sliding head. |
| 21" Cincinnati, b. g.  | 28" Barnes, sliding head.        |
| 21" Hoefer, b. g.      | 31" Barnes, sliding head.        |

#### DRILLS, MULTIPLE AND RADIAL.

- |                               |                                       |
|-------------------------------|---------------------------------------|
| 3' Morris plain radial.       | Avey 4-spindle, ball bearing.         |
| 3' Mueller plain, speed box.  | Reed 3-spindle, sensitive.            |
| 4 1/2' Bickford plain.        | Baush 16-spdl, cluster, No. 1 tapers. |
| 5' Prentice plain.            | Andrews 6-spindle, adjustable.        |
| 18" Baker, heavy duty.        | Footte-Burt 2-spindle, adjustable.    |
| Avey 2-spindle, ball bearing. |                                       |

#### SHAPERS.

- |                             |                                  |
|-----------------------------|----------------------------------|
| 10" Pratt & Whitney, crank. | 16" Stockbridge, crank, p. d. f. |
| 14" Lodge & Davis, crank.   | 20" Gould & Eberhardt.           |
| 15" Hendey, friction.       |                                  |

#### PLANERS.

- |                            |                                  |
|----------------------------|----------------------------------|
| 16"x16"x 4' Lathe & Morse. | 36"x36"x 8' Fitchburg.           |
| 22"x22"x 5' Whitcomb.      | 36"x36"x 9' American, two heads. |
| 30"x30"x 8' Flather.       | 36"x35"x15' Woodward & Powell    |
| 30"x30"x 8' Putnam.        | frog and switch planer.          |

#### MILLING MACHINES.

- |                                   |                                |
|-----------------------------------|--------------------------------|
| No. 1 Brown & Sharpe, universal.  | No. 2 Kempsmith, plain.        |
| No. 1 LeBlond, universal.         | No. 2-H Brown & Sharpe, plain. |
| No. 2 Brown & Sharpe, universal.  | No. 3 Kempsmith, plain.        |
| No. 3 Owen, universal.            | No. 3 Cincinnati, plain, (2).  |
| No. 4 Brown & Sharpe, universal.  | No. 3 Newton, plain.           |
| No. 1 Brown & Sharpe, plain, (2). | No. 3 Pratt & Whitney, plain.  |
| No. 1-Y Brown & Sharpe, pl., (6). | No. 3 Becker, vertical.        |
| No. 21 Garvin, geared.            | No. 4 Becker, vertical.        |
| No. 2 Brown & Sharpe, plain.      | No. 5-B Becker, vertical.      |

#### PRESSES.

- |                              |                                     |
|------------------------------|-------------------------------------|
| No. 18 Bliss, o. b. i.       | No. 4 Bauroth, o. b. i.             |
| No. 19 Bliss, o. b. i.       | No. 5 American Can, o. b. i., grd.  |
| No. 42 Bliss, o. b. i.       | No. 77 Toledo, geared.              |
| No. 119 Crosby, o. b. i.     | No. 2 Billings & Spencer, trimming. |
| No. 2 Bauroth, o. b. i.      | No. 12-A Adriance, double acting.   |
| No. 3 American Can, o. b. i. | No. 69-N Bliss, double acting.      |

#### GRINDERS.

- |                                |                                  |
|--------------------------------|----------------------------------|
| Landis 10x20" universal.       | Brown & Sharpe No. 3, cutter and |
| Landis No. 21.                 | reamer.                          |
| Landis No. 3.                  | Gisholt tool grinder.            |
| Greenfield, universal.         | Springfield, cup wheel, 12".     |
| Norton No. 1, tool and cutter. | Diamond, cup wheel, 12".         |

## SECOND-HAND MACHINERY

### Rumely-Wachs Machinery Co.—Continued

#### MISCELLANEOUS.

Boring mill, 30" Bullard.  
Boring mill, 42" Bullard.  
Boring mill, 42" Colburn.  
Boring mill, horiz., No. 1 Barnes.  
Brake, 8" Keene.  
Gear cutter, auto., 24" Newark.  
Gear cutter, 36" Fellows.  
Keyseaters, Nos. 2 & 3 M. & M.  
Keyseater, No. 1 Davis.

Punch, 24" Cleveland, cap, 1x1".  
Punch, 19" Kling, cap. 4x1".  
Saw, No. 22 Espen Lucas, 6" cap.  
Saw, I-beam, 24" Lucas, 15" cap.  
Saw, No. 3 Lea Simplex, capacity 5" round.  
Slotter, vertical, 12".  
Splitting shr., Badger State, 5-16" cap.  
Thread miller, 6x48" Pratt & Whitney.

#### FOR SALE BY

**W. L. Perkins Machinery Co.,**

**30 Church St., New York**

#### LATHES.

16"x8' Reed, compound rest.  
20"x8' Pond, compound rest.  
20"x10' Putnam, compound rest.

28"x14' New Haven, comp. rest.  
28"x16' Wright, compound rest.  
30"x12' Putnam, compound rest.

#### MISCELLANEOUS.

Boring mill, 30" Bullard, tur. head.  
Keyseater, No. 1 Baker Bros.  
Milling mche., No. 3 Becker-B. univ.  
Milling mche., No. 2 B. & S. univ.  
Pipe machine, 34" Saunders.

Planer, 25"x35"x4' Sellers.  
Planer, 32"x32"x8' Pond.  
Planer, 42"x42"x10' Niles.  
Shaper, 12" Walcott.  
Shaper, 26" Cincinnati, triple grd.

#### FOR SALE BY

**Frank Toomey, Inc.,**

**127 N. Third St., Philadelphia, Pa.**

#### LATHES.

50"x27' New Haven.  
50"x16' Pittsburg Machine Tool Co.  
30"x18' Bement-Miles.  
27"x21' Pratt & Whitney, taper att.  
26"x17' Johnson, taper attachment.  
26"x12' Fitchburg.

24-48"x14' McCabe, double spindle.  
21"x 9' Lodge & Davis.  
20"x8' Pratt & Whitney, taper att.  
14"x6' Lodge & Shipley.  
14"x6' Blaisdell, (6).  
20 new lathes in stock.

#### PLANERS.

48"x48"x15' Sellers.  
33"x33"x12' Woodward & Powell.  
30"x30"x12' planer, modern.

30"x30"x9' Whitcomb.  
18"x18"x5' Pond.  
12" Moore crank planer.

#### SHAPERS.

16" Stockbridge, with centers.  
16" Gould & Eberhardt, back grd.

16" American, back geared.  
12" Bement.

#### MILLING MACHINES.

36"x12' slab, heavy pattern.  
No. 3 Becker-Brain'd pl., table 12x42.  
No. 1 Brainard plain, table 12x48.  
No. 1 Kemp Smith, vertical att.

24"x73"x18" Oesterlein full univ.  
No. 0 Brown & Sharpe plain.  
No. 6 Whitney hand milling mche.  
No. 13 Becker-Brainard universal.

#### MISCELLANEOUS.

Bolt cutter, 14" National.  
Boring mill, horiz., 48" Bement.  
Boring & turn. mill, 48" Sellers, 2 hds.  
Bulldozer, No. 4 Williams & White.  
Drill, 24" Snyder, sliding head.  
Drills, upright, 30" Prentice. (2).  
Hammer, steam, 350 lb. Bement-Miles, single frame.  
Hammer, steam, 3,500 lb. Bement-Miles, double frame.  
Hammer, board drop, 500 lb. P. & W.  
Pipe machine, 4" Saunders.  
Pipe machine, 6" Cox.  
Dynamos, motors, engines and boilers, and second-hand. Send for our stock books.

Pipe machine, 10" Bignall & K.  
Pipe machines, 3" and 6" Curtis & Curtis, hand power, (2).  
Press, PG-3 Ferracute.  
Presses, combined horning and wiring, No. 22 Adriance, (2).  
Pulley boring machine, 60" Harrington, upright.  
Screw machine, No. 1 Bardons & Oliver, wire feed.  
Shear, single end, 50" throat, 2" capacity, engine driven.  
Turret lathes 14" and 24" Foster & K.  
Wood-working machines both new

## SECOND-HAND MACHINERY

### FOR SALE BY

**Niles-Bement-Pond Company, 111 Broadway, New York.**  
**Located at Chicago, Boston and New York.**  
 Send for Catalogue No. 18.

#### LATHES.

11x5 Worcester, c. r.  
 13x6 P. & W., r. & f., taper.  
 15x7 speed lathe.  
 16x10 P. & W., r. & f. & t.  
 18x6 Pond, turret tool post.  
 18x7 Pond, turret tool post.

19x8 Pond, compound rest.  
 22x12 Niles, with taper.  
 22x22 Niles.  
 40x16 Bement, b.g., not screw cutting.  
 44" P. & W. pulley lathe.

#### SCREW MACHINES, TURRET LATHES, ETC.

8"x4 1/2" P. & W. new model turret.  
 No. 3, 2 15-16" Niles screw mche.  
 2x26 P. & W. piston and piston ring equipment.  
 24-27 Conradson semi-automatic turret, 2 3-16" hol. sp.  
 3" Hartford, automatic pin machine.  
 3" P. & W. automatic screw mach.  
 3" single turret Spencer automatic.

1/2" P. & W. 2 sp. automatic screw machine.  
 8" Acme old style 4-sp. automatic.  
 21-32" No. 2 Brown & Sharpe automatic screw machine.  
 7" Cleveland automatic.  
 1" P. & W. automatic.  
 1/2" 4-spindle Gridley.  
 1 1/2" 4-spindle Gridley.

#### BORING MACHINES.

30" turret hd., b. & t. mill, Colburn.  
 5' Niles, 2 heads.  
 6' Pond, 2 heads, with slotting att.  
 7' Niles, 2 heads.  
 10' Niles, 2 hds. 220 v., motor drive.  
 10-16' Betts, 220 v., d. c., motor dr.

10-16' Bement, 220 v. motors.  
 2" sp. Kelly hor. bor. and drill.  
 3 1/2" sp. Bement hor. bor. & drill.  
 86" swing x 10' centers bor. & facing;  
 weight: about 43,000 lbs.

#### UPRIGHT AND SENSITIVE DRILLS.

13" 1 sp. sensitive, motor dr., 110 v.  
 10" 3 sp. sensitive, Sigourney.  
 2 spindle dbl. column sen., Langelier.  
 17" 4 sp. gang, Jones & L.  
 21" Aurora, b. g., p. f., sta. head.  
 21" Aurora, tapping attachment.  
 30" sli. head, Gould & Eberhardt.

36" sliding head, Gould & E.  
 4 spindle Bement, multiple, 11' between housings.  
 No. 11 multiple drill, P. & W.  
 10 sp. adjustable R. & W., capacity  
 1 1/2" holes in 37" circles, belt or motor; weight: 30,000 pounds.

#### RADIAL DRILLS.

4 1/2' semi-radial, Barr.  
 4' Niles, plain.  
 4' Niles, univ.  
 5' Niles, plain.  
 5' plain, motor, Pond.

5' 6" universal, Niles.  
 6' heavy plain, Pond.  
 6' 10" semi-universal, Niles.  
 7' 6" full universal, Niles.  
 Univ. portable radial, Prentice.

#### MILLERS AND GEAR CUTTERS.

No. 1 Duplex Van Norman.  
 43-9 1/2" No. 3 Cincinnati plain, b. g.  
 No. 2 1/2" univ. LeBlond.

No. 3 Becker universal.  
 36" spur gears, Pond.  
 72" spur gears, Niles.

#### PLANERS.

22x22x6 Harrington.  
 26x26x7 Niles, heavy type.  
 26x23x16 Miles, 2 hds.  
 30x30x6 Pond, 1 head.  
 30x30x8 Whitcomb, 1 head.  
 30x30x11 Niles, 1 head.  
 30x30x24 Sellers, 2 hds.

42x42x20 Miles, 3 hds.  
 48x48x20 Sellers, 3 hds.  
 72x60x20 Niles, 2 hds.  
 10'x10'x30' Niles, 4 heads.  
 10'x11'x36' Betts, 4 heads, 50 h. p.,  
 220 v., motor drive.

#### SHAPERS AND SLOTTERS.

10" crank shaper, Miles.  
 12" crank shaper, Bement.  
 16" crank shaper, Niles, Worcester.  
 18" double trav. head, Cincinnati.

20" Bement, 220 v. motor, traveling head, like new.  
 12" crank slotter, Bement.  
 14" crank slotter, Niles.

#### RAILROAD MACHINERY.

42" Putnam car wheel borer.  
 42" Niles heavy car wheel lathe.  
 46" car wheel lathe, Bement.

Bement and Niles dbl. axle lathes.  
 Putnam double axle lathe, ex. heavy.



## SECOND-HAND MACHINERY

### Niles-Bement-Pond Company—Continued.

#### MISCELLANEOUS.

Bar cut-off saw, 22" diam. blade.  
Cut-off machine, 24" P. & W.  
Cut-off machine, 44" Starr.  
Grinder, wet tool, Gisholt.  
Grinder, drill, 3" Sellers.

Grinder, plain, 5x32" Landis.  
Grinder, univ., 10x30 Landis.  
Grinder, 12x96" Springfield.  
Hack saws, No. 2 Robertson.  
Saw grinder, automatic.

#### FOR SALE BY

##### Peninsular Machinery Co.,

##### 110 Beaubien St., Detroit, Mich.

Centering machine, No. 1 Whiton.  
Cold saw, No. 14 Paragon high duty,  
cap. 6x6.  
Drill press, 4-sp. W. F. & J. Barnes.  
Drill press, 15" W. F. & J. Barnes.  
Gear cutter, Flather.  
Gear hobbors, 14" and 17" Lees-B.  
Grinder, surf., Walker, platen 25"x6".  
Keyseater, No. 1 Davis, 20 cutters.  
Lathe, 20" Star chucking, with tur-  
ret on carriage.  
Lathe, 22" LeBlond standard, with  
turret on carriage.  
Lathe, No. 54 Bardons & O. turret.

Lathes, 2"x24" Jones & L. turret.  
Lathe, 3"x60" Lo-Swing.  
Lathe, No. 1 Am. Fox, slide rest.  
Miller, No. 2 LeBlond univ., all att.  
Miller, Carter & H., Lincoln type.  
Miller, Pratt & W., Lincoln type.  
Power press, No. 7 Perkins model A.  
Power press, No. 5 Perkins model  
I, geared.  
Radial drill, 4' Fosdick, spd. box dr.  
Radial drill, 36" American sensitive.  
Screw machine, No. 6 Warner & S.  
Sprue cutter, Middleditch.  
Threading machines, Geometric, (2).

For prompt delivery, send for detailed description and price.

#### FOR SALE BY

##### Wm. C. Johnson & Sons Machinery Co.,

##### 210-212 Washington Ave.,

##### St. Louis, Mo.

#### LATHES.

14"x 5' Blaisdell.  
14"x12' Lodge & Davis.  
18"x14' Lodge & Davis.  
20"x 8' Wheeler.  
20"x10' Steptoe McFarland.  
20"x12' American, quick change.

24"x12' Lodge & Davis.  
26"x12' Fitchburg.  
26"x16' New Haven.  
30"x20' New Haven.  
80"x10' centers, heavy turning.

#### PLANERS.

24"x24"x6' Lodge & Davis.  
24"x24"x8' American.  
26"x26"x6' New Haven.  
32"x32"x12' Gray.

32"x32"x16' Niles.  
36"x36"x8' Hamilton.  
48"x48"x16', two heads.

#### DRILLING MACHINES.

32" Aurora, sliding head.

4' Fosdick radial.

#### BORING MILLS.

30" Niles, turret head.  
83" single spindle.  
10' Betts, two swivel heads.

Niles Corliss engine cylinder bor-  
ing machine.

#### AIR COMPRESSORS.

8x8 belted.  
9x9x9 steam driven.  
10x10x10 steam driven.

12x12x14 steam driven.  
500' and 1,000' steam driven.

#### MISCELLANEOUS.

Angle shear, dbl., L. & A., size B.  
Bolt cutter, 14", double head.  
Bolt cutter, 2" Schlenker.  
Brake, No. 14 Dreis & Krump, 10'.  
Grinder, 10x72 Landis.  
Hammer, steam, 350 lb.  
Hammer, steam, 800 lb.  
Hammer, Yeakley, 80 lb.  
Jack, hydraulic, 50 ton.  
Jacks, Simplex, 12 and 15 ton.

Keyseater, No. 3 Baker Bros.  
Miller, No. 34 Fox.  
Pulley lathe, 30" Stevens.  
Punch press, heavy, dbl. housing.  
Punch, 10" throat, rapid.  
Punch and shear, 60' throat.  
Rattler.  
Rivet machine, continuous, 1".  
Screw machine, automatic 9-16".

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Osborne & Sexton Machinery Co., . . . Columbus, Ohio.**

#### LATHES.

13"x5' Reed, hollow spindle.  
14"x5' thoroughly rebuilt.  
15"x6' Putnam and Wood-Light, (2).  
18"x10' Pond, rebuilt.  
20"x12' cabinet legs, rebuilt.  
28"-48"x15' centers, Harrington.

#### SHAPERS AND PLANERS.

11" Gould Brothers.  
14" Hendey.  
16" Smith & Mills.  
30" Morton, draw cut.  
24x24x6' Chandler, 2 speed.  
32x32x6' and 8' both Grays.

#### TURRET LATHES AND SCREW MACHINES.

12" Pratt & Whitney screw machine.  
15" Pratt & Whitney, turret.  
16" Warner & Swasey, grd. head.  
18" American Fox lathe.  
18"x12' Schumacher & Boye.  
5" bar turret, Pratt & Whitney.

#### DRILLING MACHINES.

20, 22, 24 and 30".  
4 spindle gang, sensitive.  
4-spd. multiple, Foote-Burt.  
24" heavy duty Foote-Burt.  
4-spd. Niles, 2" capacity.  
30" radial, plain, (2).

#### MISCELLANEOUS.

Cold saw, Lucas, 8" capacity.  
Grinder, dbl. disc, No. 10 Besly.  
Hammer, helve, 25 lb. Bradley.  
Hammer, helve, 60 lb. Bradley.  
Hammers, fric. bd., 300, 400 & 3,000 lbs.  
Oil engine, 10 h. p. Alamo, new.  
Press, o. b., No. 3 Crosby.  
Punch press, No. 3 Stiles.  
Rolls, shovel blanking, Toledo.  
Valve miller, Warner & Swasey.

### FOR SALE BY

**A. D. White Machinery Co., . 108-114 N. Jefferson St., Chicago**

#### LATHES.

14"x 8' Putnam, (2).  
16"x 6' Fay & Scott.  
16"x 8' Bradford.  
18"x 8' Walcott.  
20"x10' Porter.  
24"x10' Lodge & Shipley, q. c.  
28"x12' Fifield.  
28"x25' Putnam.

#### DRILL PRESSES.

No. 1 Barr sensitive, (3).  
20" Barnes, (3).  
28" Barnes, sliding head.  
28" Bickford, sliding head.  
30" Kerkhoff, sliding head.  
32" Bickford, sliding head.  
34" Barnes, sliding head.  
36" Mueller radial.  
40" Aurora radial.  
20" Barnes 4 spindle gang.  
8-spindle Valley City multiple.  
12-spindle Baush multiple.

#### PLANERS.

24"x 6' Pond.  
26"x 8' Gray.  
28"x 8' Gray.  
32"x 8' Betts.  
35"x12' Niles.  
38"x10' Gray.

#### SCREW MACHINES AND TURRET LATHES.

Warner & Swasey w. f. screw mch.  
No. 2 Garvin screw machine.  
4" Hartfords, (3).  
8" Cleveland.  
No. 00 B. & S. automatics, (9).  
No. 2 Smurr & Kamen turret lathe.  
28" Pond turret lathe.  
20" Potter & Johnston automatic.

#### PUNCH PRESSES AND SHEARS.

No. 39 Fladd, o. b. i.  
No. 5 Niagara, o. b. i.  
No. 45 Crosby, open back.  
No. 3 Ferracute, double action.  
King power forcing press.  
Nos. 242 & 152 Niagara pwr. sq. sh.

#### MISCELLANEOUS.

Bolt cutters, 1 1/2 & 3" National, s. hd.  
Grinder, drill, Yankee style "B".  
Grinder, internal, No. 70 Heald.  
Grinder, disc, 30" Ransom.  
Grinder, cutter, Barr.  
Hobber, Farwell No. 1.  
Hammer, power, 50 lb. D. & E.  
Keyseater, 16" Morton, portable.  
50 h. p. Gas Producer Plant, with 50 h. p. Fairbanks-Morse engine. Does not cost more than \$1.00 a day to operate.  
Millers, No. 3 Fox, hd. and pwr. fd.  
Millers, No. 12 Garvin, (3).  
Miller, plain, No. 9 Kempsmith.  
Miller, mfg., No. 6 Grant.  
Pipe machine, 2" Jarecki.  
Saw, univ. cut-off, O. & C. No. 2-B.  
Shapers, 16" and 24".  
Tapper, No. 2 Garvin horizontal.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Marshall & Huschart Machinery Company,**

**Chicago - Indianapolis - St. Louis**  
**17 S. Jefferson St. 334 N. Capitol Ave. 915 Chemical Bldg.**

#### BORING MACHINES.

48" Barrett horizontal, bed 48"x84".	30" Baush vertical, 3-jaw chuck.
76" Barrett horizontal, 6" bar.	42" Bullard, 1 plain, 1 swivel tur.hd.
No. 2 Baker Bros cylinder borer.	52" Rogers & Hemphill, 2 swivel hds.
Lucas & Gleim horiz., table 16x36.	48" car wheel, for 36" wheels.

#### DRILLING MACHINES.

2-sp. Allen ball bearing sensitive.	24" Fosdick pl. radial, swinging tbl.
3-sp. Rockford gang, power feed.	30" Fosdick plain radial.
4-spindle Foote-Burt gang.	30" Gang plain radial.
10-spindle Natco multiple, capacity	42" Alfred Box Co. plain radial.
ten 5-16" drills.	5" Western full universal radial,
12-sp. Western mult., capacity 1".	gear box drive.

#### GEAR HOBBSERS AND GEAR CUTTERS.

Adams gear hobber.	30"x7" G. & E. new type, spur gear.
24" S. & S. gear hobber.	36"x9" G. & Eberhardt, spur gear.
22" G. & E. spur & bevel g. cutter.	36"x10" Cincinnati, spur gear.
26 Cincinnati spur gear cutter.	50"x10" G. & E., spur and bevel.
26"x8" B. & S. spur gear cutter.	16" Bilgrim gear generator.
30" Flather spur gear cutter.	36" Fellows gear shaper.

#### GRINDERS.

No. 1 LeBlond cutter and tool grinder.	No. 60 Heald cylinder grinder.
	No. 6 Rivett precision grinder.

#### KEYSEATERS.

Knowles broaching machine.	No. 1 Baker Bros. keyseater.
No. 2 Lapointe broaching machine.	

#### ENGINE LATHES.

13"x6" Willard, compound rest.	18"x8" Milwaukee, 3-s. cone, dbl. b.g.
14"x6" Lodge & Shipley, q. c. g.	18"x14" Lodge-Davis, plain rest.
14"x6" Whitcomb-B., with taper.	20"x10" W.-B., q. c. 3-s. cone, dbl. b.g.
14"x6" American, geared hd., q. c. g.	20"x8" Lodge & S., pat. hd., q. c. g.
15"x6" Von Wyck, compound rest.	24"x8" L. & S., 3-s. cone, dbl. b. g.
15"x6" Bradford, with taper 5-s. cone.	26"x21" Pond, raised to swing 41 1/2".
16"x8" Whitcomb-B., qck. chg. grs.,	36"x14" Fifeild.
3-step cone, dbl. bk. gears, taper.	42"x20" Fifeild.

#### TURRET LATHES AND SCREW MACHINES.

14" Garvin, 1 1/2" hollow spindle.	Lodge & B., Fox Monitor, univ.
12" Foster & Kimble, plain turret.	set over, chasing attachment, etc.
16" Warner & Swasey, plain turret.	21"x8" Bogart turret lathe.
18" Lodge & Davis turret lathe,	24" Conradson heavy turret lathe.
power feed to turret.	28" Pond rigid turret lathe.
18"x4" Gray turret.	4" Pratt & Whitney automatic.
20" Bullard combination turret.	8" and 10" Cleveland automatics.

#### MILLING MACHINES.

No. 12 Hisey.	No. 3 Owen plain.
No. 2 Kemp Smith pl., belt power fd.	No. 12 Brown & Sharpe plain.
No. 2 Cincinnati plain, cone type.	Becker-B. univ., all feeds, geared.
No. 2 Cincinnati univ., cone type.	No. 4 Cincinnati plain, cone type.
No. 2 LeBlond plain.	No. 3 Oesterlein plain.
No. 3 LeBlond plain.	42"x36"x8" Ingersoll slab miller.

#### PLANERS.

22"x22"x5" Pond, parallel drive.	30"x30"x10" Gleason.
26"x26"x6" Gray.	36"x36"x10" American, 1 head.
30"x30"x8" Cleve. open side, 2 hds.	44"x44"x12" Pond, 4 heads.

#### SHAPERS.

15" Lodge & Davis.	24" Smith & Mills, bk. grd. crank.
16" Steptoe, crank.	26" American, triple geared, shift-
16" Smith & Mills, crank.	ing belt.
16" Gould & Eberhardt, crank.	34" Walcott, geared, shifting belt.

Send for our latest list "Used Machinery," just issued.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Bowman-Blackman Mch. Tool Co., 1513 N. Broadway, St. Louis, Mo.**

#### COMPLETE MACHINE SHOP EQUIPMENT.

Cold saw, 13" Higley.  
 Drill press, 20" Lodge & Davis, sliding head, back gears, power feed.  
 Drill, gang, 4-spindle Baker heavy duty, back geared, power feed.  
 Grinder, drill, Yankee style A.  
 Grinder, universal, Greenfield.  
 Keyseater, Davis.  
 Lathes: 14x6 Lodge & Shipley patent head, 21x10 Lodge & Davis, 18x10 Lodge & Davis, 18x8 Bradford, 27x12 J. B. Reed, 27x8 turning lathe without screw cutting, Jones & Lamson flat turret lathe.  
 Milling machine, plain, No. 3 Brainard.  
 Planers: 24x6 Lodge & Davis, 24x6 Powell, 42x36x8 Pond.  
 Pulley boring machine, 36" Streit.  
 Pulley lathe, 30" Henley.  
 Radial drill, 3½" Sellers, modern.  
 Shapers: 20" Cincinnati, 24" American.

### FOR SALE BY

**Brown-McDonald Machinery Co.,**

**906-908-910 North Market Street, - - - - St. Louis, Mo.**

#### LATHES.

14", 16" & 18" Monarch, new, (5).  
 16"x6" American Fox, b. g., turret.  
 16"x6" Hamilton, h. s.

16"x8" Von Wyck, standard, new.  
 32"x12" American, h. s., comp. rest.  
 Speed lathes, all sizes, (6).

#### DRILLING MACHINES.

12" Acme, sgl. spdl., cap. ½".  
 Fox, 2-spindle, cap. ½".  
 Reed, 3-spindle, cap. ½".

20" Lodge & Davis, w. & l.  
 22" Snyder, b. g., p. f.  
 26" Barnes, b. g., p. f., with tap. att.

#### MISCELLANEOUS.

Brake, 8' Robinson, cap. 20 gauge.  
 Gear cutter, No. 11 Dwight-Slate.  
 Hack saw, No. 1 Racine high speed.  
 Press, No. 33 Swaine.  
 Press, horn, No. 1 Swaine.

Presses, foot, No. 3 Swaine, (2).  
 Press, horn and wiring, No. 1 Swaine.  
 Screw machine, No. 2 Pratt & W.  
 Shear, pwr. sq., 8' Bertsch, cap. 16 ga.  
 Tapping machine, No. 1 Wells.

Large stock of sheet metal tools consisting of Square Shears, Folders, Seamers, Beaders, Crimpers, etc.

### FOR SALE BY

**Badger-Packard Mchy. Co., 72-74-76 W. Water St., Milwaukee, Wis.**

#### DRILLS.

10" Hofer, sensitive.  
 24" Mechanics, sliding head.

26" Mechanics, sliding head.  
 16" 4-spindle Barr.

#### LATHES.

No. 4 Barnes.  
 11"x4" Star, foot power.  
 12"x6" Davis, r. and f. rest.  
 14"x6" Silk, compound rest.  
 14"x6" Lodge & Davis, pl. rest.  
 14"x6" Lodge & Shipley, c. r., g. c. g.

14"x8" Blaisdell, plain rest.  
 16"x8" Flather, comp. rest.  
 21"x12" Lodge & Davis, plain rest.  
 24"x12" Perkins, compound rest.  
 2" Plain turret lathe.

#### MILLING MACHINES.

No. 2 Kearney & Trecker, plain.

No. 3 Kempsmith, plain.

#### RADIAL DRILLS.

2½" Dreses-Mueller, plain.  
 3" Bickford, plain.

4" Fish, plain.

#### PLANERS.

20"x20"x4" New Haven.  
 24"x24"x6" Lodge & Davis.

26"x26"x8" Merrill.  
 60"x60"x16" Niles.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.**

#### BORING MILLS.

20" Bullard, turret head.  
2 sp. Foote-Burt, cylinder.  
48" Bement, car wheel.  
9' Pond, vertical, 2 heads.

5" bar Beaman & Smith, horizontal.  
No. 2B Binsse, horizontal.  
No. 5C Binsse, horizontal.

#### DRILLING MACHINES.

2 sp. Henry & Wright.  
3 sp. Avey, high speed.  
20" & 23" Barnes, back geared.  
31" Barnes, sliding head.

25", 28" & 30" Snyder, sliding hd.  
No. 1 Baker Bros., high speed.  
5' Prentice Bros., plain radial.  
60" & 48" Bement radials.

#### GRINDERS.

No. 60 Heald, cylinder.  
10x50 and 18x168, Norton.  
18x96 Norton.

No. 4 Besly, disc.  
No. 210 Heald, piston ring.  
No. 1 Cincinnati, cutter.

#### MILLING MACHINES.

No. 5 Hendey, Lincoln.  
No. 2 LeBlond, plain.  
No. 1 Milwaukee, universal.  
No. 5 Brown & Sharpe, plain.

No. 5 Becker, vertical.  
No. 24 Brown & Sharpe, plain.  
No. 4 Cincinnati, plain.  
No. 2 Cincinnati, universal.

#### LATHES.

9"x44" Star, foot power.  
11"x5' Prentice Bros., c. r.  
12"x6' LeBlond, c. r.  
15"x6' Putnam, c. r., taper.  
16"x6' Lodge & Shipley, patent hd.  
16"x8' Prentice Bros., compound  
rest, power cross feed.  
16"x8' Putnam, compound rest.  
16"x12' Reed, compound rest.  
18"x8' Prentice Bros.

20"x10' Hendey, taper.  
20"x10' Lodge & Shipley.  
21"x21' Lodge & Davis.  
22"x6' Reed, compound rest.  
24"x12' Putnam, c. r.  
24"x16' LeBlond, chucks.  
27"x10' Flather, compound rest.  
26"x16' Pittsburgh, quick change.  
30"x20' Lodge & Shipley, patent.  
36"x14' Fay & Scott, triple geared.

#### PLANERS.

15"x15"x 3' Pratt & Whitney.  
30"x30"x10' Bement, 2 heads.  
36"x36"x 8' Pond, 1 head.  
36"x36"x12' Lodge & Davis, 2 hds.  
38"x38"x12' Gray, 2 hds.  
42"x42"x14' Pond, 2 heads.

48"x48"x10' Powell, motor drive.  
42"x42"x14' Woodward & Powell,  
4 heads.  
60"x50"x10' Gray, 2 heads.  
71"x69"x14' Pond, 2 hds.

#### PRESSES.

No. 4 Mossberg & Granville.  
No. C-82 Ferracute, notching.

P-2 Ferracute.  
E 12 Ferracute, inclined.

#### SCREW MACHINES.

1"x7" P. & W., wire feed.  
1" Dreses, wire feed.  
No. 2, 1" Garvin, wire feed.  
No. 2 P. & W., wire feed.  
No. 24 P. & W., wire feed.  
24" American, heavy.

24" Gridley auto.  
4. & 1" Cleveland auto.  
22" Libby, turret.  
3" Bardons & Oliver, (3).  
2x24 Jones & Lamson.  
3x36 Jones & Lamson.

#### SHAPERS.

8" Gould & Eberhardt.  
16" Gould & Eberhardt.  
24" Gould & Eberhardt.

26" Gould & Eberhardt.  
28" Juengst, crank.  
14" Steptoe, crank.

#### MISCELLANEOUS.

Angle shear, 6" Hilles & Jones.  
Bolt cutter, 2" Acme.  
Broaching mche., No. 2 LaPointe.  
Cold saw, 9" Espen-Lucas.  
Die slotter, Garvin.  
Gas blowers, Nos. 1, 3 & 4 American.  
Gear cutters, 16", 24", 36" and 48"  
Gould & Eberhardt.  
Gear cutter, 36" Cincinnati.

Gear shaper, 36" Fellows.  
Keyseater, No. 1 Davis.  
Pipe machine 6" Armstrong.  
Pipe machines, 3", 4" and 8" Jarecki.  
Punch and shear, Hilles & Jones.  
Saw, Robertson high speed.  
Slotters, 10" and 18".  
Stake riveter, 80" Rock River.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Broadway Machinery Co., 236-238 Broadway, Cincinnati, Ohio**

Band saw, metal Wright.	Planer, 24"x24"x7' New Haven.
Drills, 20" to 50" upright.	Planer, 24"x24"x8' Gray.
Lathe, 14"x6' Bradford.	Planer, 30"x30"x14' Miles, 2 heads.
Lathe, 16"x8' Steptoe, hollow spindle.	Planer, 48"x48"x24' Niles.
Lathe, 18"x12' Bradford, hol. sp., c. r.	Planer, 72"x72"x18' Niles, 2 heads.
Lathe, 20"x6' Rahn-Carpenter, gap.	Radial drills, 3" Prentiss, (2).
Lathe, 28"x21' Barker, hol. sp., c. r.	Screw machine, 1" Cleveland auto.
Lathe, 30"x18' New Haven, comp. r.	Screw machine, 2" Cleveland auto.
Lathe, 36"x16' Le Blond, q. c., hol. sp.	Shapers, 10" and 14" crank.
Lathe, 68"x36' Niles, comp. rest.	Shapers, 18, 20 and 24" geared.
Milling machines, Cincinnati, Garvin	Shaper, 28" Queen City, back geared
and Kemp Smith.	crank.
Steam hammers, motors, boring mills, grinders, rolls, brakes, etc., etc.	

### FOR SALE BY

**The Machinery Warehouse, 3705 S. Ashland Ave., Chicago, Ill.**

84"x54"x20' Sellers.	PLANERS.
44"x44"x12' Pond.	36"x36"x14'6" Sellers.
42"x42"x14' D. & H.	36"x36"x12' Gray.
40"x38"x14' Putnam.	32"x32"x9' New Haven.
	30"x31"x10' Flather.
60" Morton.	SHAPERS.
16" Cincinnati, crank.	12" Boynton & Plummer.
	LATHES.
36"x154' Prentice.	15"x5' Shepard.
16"x6' Star, (3).	62" Lodge pulley lathe.
	DRILLING MACHINES.
26" Hoefler, back geared.	54" Niles, plain radial.
60" Gang, plain radial.	48" Bickford.
	CHAIN HOISTS.
4 ton Harrington.	10 ton Yale & Towne.

We carry a full line of electrical equipment, air compressors and pumps. We also have more than 100 Corliss, automatic and vertical engines in stock. Write us for any size rebuilt.

### FOR SALE BY

**Girard Machine & Tool Co., 491-493 N. Third St., Philadelphia, Pa.**

	RADIAL DRILLS.
Prentice Bros. and Bickford 5' and 6' equipped belt or motor drive.	LATHES.
50"x18' Fitchburg, standard.	20"x10' Star, standard.
48"x18' Schumacher & Boye, q. c. g.	18"x10' LeBlond, standard.
32"x10' Putnam, standard.	18"x8' LeBlond, standard.
30"x27' Pond, standard.	16"x8' Reed, standard.
24"x14' Lodge & Shipley, q. c. g.	14"x6' American, q. c. g., (5).

**SCREW MACHINES.**  
P. & W., W. & S., 2x24 Jones & Lamson, and other makes of turret lathes and screw machines.

### BORING MILLS

38" Baush, vertical, two heads.	28" B. & S., with turret head.
36" Bridgeport, vertical, two heads.	30" Bullard, with turret head.
48" Bement car wheel borer.	No. 3 Binsse horiz. boring mche.

### MISCELLANEOUS.

Drill presses, all sizes.	Planers, all sizes.
Gear shapers, 36" Fellows.	Punch and shr. comb., No. 4 Perkins.
Grinders, B. & S., Landis, Modern.	Shapers, crank, 16", 18", 20" & 24"
Hammers, steam.	Shaper, traverse, double head, 18"
Milling machines, plain and univ.	Cincinnati.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Motch & Merryweather Machinery Company,**  
**707-715 Lakeside Av., N. W., Cleveland, Ohio**

**Branches: Detroit, Cincinnati, Pittsburg.**

### BORING MILLS.

No. 1 Lucas, table type.  
 No. 21 Lucas, table type.  
 4" bar Bement-Miles, table type.  
 6" Niles horizontal.  
 30" Bullard vertical mills, (4).

34" Colburn vertical.  
 36" Bullard vertical turret lathe.  
 72" Pond friction feed, 2 heads.  
 16" Pond double head.

### DRILLS, UPRIGHT.

20" 2-sp. Mechanics, wheel & lever.  
 20" Baker, style "F".  
 24" Aurora.  
 32" Aurora.  
 32" Pond, sliding head.  
 34" Barnes.

40" Aurora.  
 Foote-Burt special high speed drill press, tapping attachment.  
 Foote-Burt high speed drill press, geared feed.

### DRILLS, SENSITIVE & MULTIPLE.

12" Redington.  
 12" 4-sp. Barr, pl. bearings.  
 12" 4-sp. Pratt & Whitney.  
 13" LeBlond, table and c. a.  
 13" Redington, drill chuck and c. s.  
 14" No. 2 Barr, (2).  
 14" Foote-Burt, 1-spindle.  
 14" Foote-Burt, 2-spindle.  
 14" Foote-Burt, 6-spindle.

14" Woodward & Rogers, bench, with chuck and c. a.  
 16" No. 7 Barr.  
 No. 3 Baker 2-spdl, cylinder borer, with adj. center distance.  
 3-spindle Baush.  
 No. 43 Gardam 8-sp, adj., 1" cap.  
 8-sp. Moline No. 31, rail.

### GRINDERS.

12"x14" Grinder stands, (5).  
 No. 11 Brown & Sharpe, plain, (3).  
 No. 13 B. & S., universal and tool.  
 No. 3 Landis, plain.  
 10x36 Landis, plain.  
 12x42 Landis, plain, swivel hd., (2).

No. 1 Leland & Falconer, wet tool.  
 No. 3 LeBlond, univ. tool & cutter.  
 Yankee wet drill grinder.  
 No. 210 Heald, wet.  
 No. 200 Heald dry grinder.  
 12" wheel Pratt & Whitney, surface.

### MILLING MACHINES.

No. 13 Pratt & Whitney Lincoln.  
 No. 0 Brown & Sharpe.  
 No. 13 Becker-Brainard.  
 No. 0 Kemp Smith.  
 No. 2 Brown & Sharpe, universal.  
 No. 2 Brown & Sharpe, cone driven, heavy, slotting attachment.  
 No. 2 LeBlond plain, belt feed.  
 No. 3 Brown & Sharpe, pl., oil pump.  
 No. 3 Brown & S. plain, auto. feeds.

No. 3 Cincinnati, pl., belt fd., chuck.  
 No. 3 Cincinnati plain, belt feed, vertical attachment.  
 No. 3 LeBlond, plain, high power.  
 No. 4 Cincinnati plain, geared feed.  
 No. 5 Hendey, Lincoln type.  
 No. 13 Brown & Sharpe, Lincoln type.  
 No. 32 Kemp Smith, Lincoln type, geared feed, (4).

### LATHES.

13"x6' Willard, comp. rest.  
 14"x6' Rockford.  
 16"x10' Lodge & Shipley.  
 18"x8' Reed, taper att.  
 18"x6' Bradford.  
 20"x6' American.  
 20"x10' New Haven.  
 20"x12' Fish.  
 20"x10' Johnson, taper att.  
 22"x10' Lodge & Shipley.  
 22"x16' David Pond.

22"x12' Pond.  
 26"x14' Grant & Bogart, taper att.  
 Roll lathe, 39" swing, 9' centers.  
 36"x20' Pittsburgh.  
 42"x24' American engine lathe.  
 50"x18' Fifield.  
 60"x43' Roche engine lathe.  
 60"x46' Hewes & Phillips, comp. r.  
 60"x43' Hewes & Phillips, comp. r.  
 10"x43' Bement-Miles crankshaft turning lathe.

### SCREW MACHINES AND TURRET LATHES.

2" Cleveland auto. turret lathe, (2).  
 24" P. & W. geared hd. tur. lathe, (2).  
 14" Pratt & Whitney turret lathe.  
 2" Pratt & Whitney turret lathe.  
 No. 2 Warner & Swasey turret new model screw machine.  
 22" Libbey turret lathe.

14"x4" Brown & Sharpe, auto chuck.  
 No. 2 Foster, plain head.  
 No. 3 Bardons & Oliver.  
 14" Dreses, w. fd., pwr. fd. to turret.  
 2"x24" J. & L., sld'g hd. chuck'g (2).  
 24" Davis chucking lathe.  
 24"x10" L. & S., with power cross fd.

The above are in our Cleveland warehouse, and will be shipped on approval.

## SECOND-HAND MACHINERY

### FOR SALE BY

**L. F. Seyfert's Sons, Inc.,**

**437 N. Third Street, Philadelphia**

#### TURRET LATHES.

16"x6" Pratt & Whitney, (2).  
No. 2 Bardons & Oliver.  
16"x20" No. 4 Windsor.

16"x24" Pratt & Whitney.  
Foster, ring type, 24"x28", auto. feed,  
complete, (2).

#### MISCELLANEOUS.

Drill, 42" Barnes, slid. head.  
Drills, plain radial, 5' Prentice. (2).  
Drill, univ. radial, 84' Bickford.  
Grinder, univ., No. 2 Oesterlein.  
Lathe, 11"x4' South Bend.  
Lathe, 12"x13' Champion.

Lathe, 16"x6" Putnam, motor drive.  
Lathe, 18"x6" Reed.  
Miller, univ., No. 2 Brown & Sharpe.  
Miller, plain, No. 20 Oesterlein.  
Miller, plain, No. 34 Oesterlein.  
Slotter, 10-12" Dill.

### FOR SALE BY

**Wayne Machinery Co., Taylor St. & L. E. R. R., Fort Wayne, Ind.**

#### RANDOM SELECTIONS

From our stock of 500 machines.

Bolt cutter, No. 50 Green River.  
Boring mill, 34" Colburn.  
Drill press, 20" Canedy-Otto.  
Drill press, 20" Rockford, p. f.  
Drill press, 36" Aurora, p. f.  
Engine lathe, 14"x6" Cisco, q. c. g.  
Engine lathe, 14"x32" Reed Bros.  
Engine lathe, 18"x10" Star Tool Co.  
Machine tools and pattern shop machines for every requirement.  
Write today for Wayne List, which fully describes our complete stock.

Engine lathe, 30"x12' New Haven.  
Hack saw, No. 4 Racine, h. s.  
Planer, 36"x36"x8' Powell.  
Planer, 26"x26"x8' Pond.  
Shaper, 16" Ohio, back geared.  
Turret lathe, 16" Acme, w. f.  
Turret lathe, 16" Lodge-Davis.  
Universal head, 10" Dickow.

### FOR SALE BY

**Chas. Molitor Machinery Co.,**

**215 S. Clinton St., Chicago, Ill.**

Broaching machine, No. 4 Lapointe.  
Drill, 4 spld., heavy pattern.  
Gap shear, 15" heavy, 36" square.  
Grinder, heavy univ., 13x40 Landis.  
Horn press No. 3.  
Keyseater, No. 6 Morton.  
Keyseater and slotter.  
Lathe, 17"x8" Springfield, q. c. g.,  
taper att., motor attached.  
Lathe, 30"x26" Ames.  
Miller, bench, Rivett.  
Tanners' rollers, brakes, shears, punch  
100 other iron and woodworking machines, motors, etc.

Planers, 6' to 12', (3).  
Presses, arch, dbl. crank, 36"-54".  
Press, geared, Waterbury-F., 4" str.  
Press, notching, American Can Co.  
Punch press No. 4, back geared.  
Radial drill, 32" Fostick.  
Screw machines, 1"-3" Brown &  
Sharpe and Jones & Lamson.  
10 Screw machines and turret lathes.  
Shaper, 20" heavy, back geared.  
Wiring machine, universal, Yoder.

### FOR SALE BY

**McCoy & Brandt,**

**410 House Building, Pittsburgh, Pa.**

Band saw, 36", tilting table.  
Boring mill, Binsse, 4" bar.  
Bulldozers, W-W 1, 2, 4, 5 and 8.  
Crane, 40-ton, 60' span, 220 v., d. c.  
Drill presses, 14", sensitive.  
Gas engine, 20 h. p. Ajax.  
Grinder, 156" Bridgeport, auto. knife.  
Hammer, 75 lb. Bradley, upright strap  
Lathes, 16"x6", 17"x10", 20"x10".  
Milling machine, No. 3 Cin. univ.  
Motors, 1 to 600 h. p., a. c. & d. c.  
Nut tapper, 2", double head.  
Pipe & cutting-off machine, 2" Cox.

Pipe machines, 6", 8", 12".  
Planer, 30"x30"x10' Gray.  
Presses, Bliss 52, 734, 744, 754, 133.  
Press, Bliss No. 405 spl. toggle.  
Presses, Ferracite D-55, DG-56S-132.  
Punch, multiple, 45" Niagara 65-C.  
Shear, No. 16-A Niagara, ring and  
circle.  
Shear, 60" Smith quick work rotary.  
Shears, squaring, 96", 144".  
Shears, guillotine type, 4", 5" sq.  
Turret lathes, 16"x6", h. s.

All good. Prices attractive.



## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., 566-72 W. Randolph St., Chicago**

#### LATHES.

7"x32" Stark, c. r. and chucks.	18"x8" Reed, compound rest.
11"x5" Star, compound rest.	18"x10" American, q. c. g.
12"x8" Hendy, tool wk.	18"x10" S. & B., with taper.
14"x5" P. & W., with taper.	18"x11" Lodge & Davis, taper.
14"x6" Flather, q. c. g. and taper.	20"x8" Lodge & Shipley, d. b. g.
15"x6" Von Wyck, d. b. g.	20"x10" Cincinnati compound rest.
16"x6" Cincinnati, reliev. attach.	30"x12" Flather, like new.
16"x8" Hamilton, with taper.	30"x18" Reed, with chuck.
16"x10" Cin., turret on shears.	32"x14" Putnam, compound rest.
18"x8" Bradford, c. r. and chuck.	32"x18" Pittsburg, d. b. g.

#### SHAPERS.

6" Boynton & Plummer.	24" Stockbridge, power down feed,
17" Barker & Chard.	tilting table, centers.
24" Gould & Eberhardt.	26" Putnam, triple geared.

#### PLANERS.

22x22x5 Pease.	40x38x14 Putnam.
26x26x6 Pond.	42x42x14 Detrick & H., open side.
26x26x8 Whitcomb.	44x44x12 Pond.
36x36x12 Gray.	

#### GRINDERS.

No. 1 Cin., univ. cutter & tool.	No. 2 Brown & Sharpe, surface.
No. 2 Norton, univ. cutter & tool.	No. 2 B. & S., surface, with mag.ck.
No. 2 Bath, univ. cutter & tool.	

#### MILLING MACHINES.

No. 3 VanNorman, bench.	No. 2 Cincinnati universal.
No. 2 Burke, column.	No. 10 Pratt & Whitney, hand.
No. 18 B. & S., universal.	No. 28 B. & S., plain.
No. 2 B. & S., plain.	No. 2 Cincinnati, plain.
No. 2 Owen, plain.	No. 32 Kempsmith, Lincoln type.
No. 1Y, B. & S., plain, (2).	No. 12 Garvin, plain, (4).
No. 2 LeBlond, plain.	

#### DRILLING MACHINES.

Henry & Wright, single spindle.	20" Davis, b. g. & p. f.
Henry & Wright, 6 spindle.	21" Aurora, b. g., p. f. & tap. attach.
Barr, 4 spindle, (6).	28" Cincinnati-Bickford, comp. tbl.

#### POWER PRESSES.

No. 3 Walsh, (2).	No. 3 Bliss, double crank.
No. 3 Am. Can Co.	No. 18 Bliss.
No. 3 Consolidated.	No. 430 McDonald, double crank.
No. P5 Ferracute.	Humphrey, single end punch and
No. 54 Walsh.	shear, 36" thr., 14"x14", like new.

#### PROFILER.

No. 2 Garvin 2-spindle, like new.

#### SCREW MACHINES.

No. 1 Warner & Swasey.	No. 4 Bardons & Oliver.
No. 2 Warner & Swasey.	No. 51 National automatic.
No. 24 Pratt & Whitney.	6" Cleveland automatic.
No. 2 Woods, lot of tools.	8"-4" Cleveland automatic.
No. 3 Warner & Swasey.	No. 00 B. & S. automatic.

#### BORING MILLS.

37" Niles vert., 2 heads.	34" Colburn, turret head.
42" Bullard, 2 heads.	No. 3 Binsse, horizontal.

#### GEAR CUTTERS.

42" Gould & Eberhardt.	26" Brown & S., spur and bevel.
30" Flather.	12" Reynolds hobber.

#### MISCELLANEOUS.

Bolt cutters, turret lathes, grinders, pipe machines, cutting-off machines, cold saws, hack saws, hammers, bulldozers, motors, viz.:s, Brown & Sharpe surface plates, bench plates, die filers.  
Everything used in the shop.

## **Large Plain Grinder.**

Landis 30" swing, 150" between centers.

## **Ball Race Grinders.**

Several No. 5 Rebuilt Rivett.

## **Planers.**

48"x48"x20' Putnam, Two Heads on the Rail.

## **Millers.**

Several Rebuilt No. 6 Brainard, Lincoln Type.

## **Chandler & Farquhar Company**

419-425 Atlantic Ave., Boston, Mass.

### **WHEN YOU INQUIRE**

of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are human; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.

The scarcity of Tools this year  
makes this list important to all shops

## For Immediate Shipment

<b>Turret</b>	Four (4) "Potter & Johnston" Automatics 8½x16-in. 20-in. Swing.
<b>Lathes</b>	Two (2) "Potter & Johnston" Automatics 5½x10-in. 2½-in. Hollow-spindles, 17-in. Swing.
	One (1) "Potter & Johnston" Double Turret Lathe 2-in. Hollow-spindle, 22-in. Swing.
	One (1) "Gisholt" type "H" 21-in. Swing, 2-in. Hollow-spindle.
	One (1) "Jones & L." Flat Turret 2x24 Sliding-hd.
	One (1) "Jones & L." Flat Turret 2x24 Cone-hd.
	One (1) "Bardons & Oliver" No. 12 Bar and Chucking Machine, 4-in. Hol.-Spdl.
	One (1) "Pond", Gisholt pattern "Rigid type" 28-in. Swing, 4-in. Hollow-spindle.
	Two (2) "Garvin" No.14, Fric. Hd. 3½" cap. 1½" Ø.
	One (1) "Garvin" No.13 Wire fd., Grd. Fric. Hd.
	One (1) "Garvin" No. 3 Screw Machine.
	One (1) "Hartford" Auto. Screw Machine, 1½-in.
<b>Engine</b>	Three (3) 16" Sw., 6' bed, 3-step Cone, dbl. bk. grs.
<b>Lathes</b>	Four (4) 18" Swing, 8' bed.
<b>New</b>	One (1) 21" Swing, 10' bed, also one 12' bed.
	One (1) 24" Swing, 10' bed, also one 12' bed.
	One (1) 28" Swing, 12' bed, also one 14' bed.
	One (1) 32" Swing, 14' bed, also one 16' bed.
	Seven (7) 26-48" Swing, 14' bed, McCabe 2-in-1.
	Three (3) 26-48" Swing, 16' bed, McCabe 2-in-1.
	Four (4) 26-48" Swing, 18' bed, McCabe 2-in-1.
<b>Used</b>	20-in., 24-in., 26-in., 28-in. & 30-in. Sw., 10-ft., 12-ft. and 14-ft. beds, Prentice Bros., Reed.
<b>Lathes</b>	Two (2) 30" Sw., 14' bed, "Extra heavy" Bement.

See last month's issue Hitchcock's List for complete list of Lathes, Planers, Drills, Upright Boring Mills, Milling Machines, Bridge and Boiler-Shop Tools, Slotters, Shapers, Gear Cutters, Grinders, Etc.

**J. J. McCABE, - 30 Church St., New York**

# **Second-Hand Machinery**

*For Sale By*

## **Vonnegut Machinery Company**

**121 S. Meridian St., Indianapolis, Ind.**

### **TURRET LATHES.**

1- $\frac{3}{4}$  Pratt & Whitney.  
16" Davis & Egan.  
18"x6' Lodge & Davis.  
24"x8' Lodge & Shipley.

### **MILLING MACHINES.**

No. 3 $\frac{1}{2}$  Pratt & Whitney Horizontal.

### **GRINDERS.**

No. 200 Heald Ring Grinder.  
No. 210 Heald Ring Grinders.  
No. 60 Heald Cylinder Grinder.  
Cincinnati Tool and Cutter Grinder.  
Dayton Tool and Cutter Grinder.

### **BORING MILLS.**

34" Colburn.

### **AUTOMATICS.**

2", 3-hole model "C" Cleveland.

**We are expecting a large list of**

**Lathes**

**Turret Lathes**

**Milling Machines**

**We may be ready to give specifications on this Machinery before the end of June and solicit inquiries of your requirements.**

# THE E. L. ESSLEY · MACHINERY · CO

555-557 WASHINGTON BLVD. CHICAGO

222 GRAND AVE. MILWAUKEE

## Boring Mills.

30" Bullard, sw. turret, pl. table, (2).  
42" Baush, 1 pl., 1 tur. hd., pl. table, (2).  
51" Niles, 2 heads, plain table.  
60" Baush, 2 heads, plain table, (2).  
No. 1 Barrett horiz. cyl. borer.  
No. 2 1/2 Universal horiz., nearly new.

54" Colburn with center boring spindle and full set of fixtures & tools for flywheel work, like new.  
No. 2 Rockford horizontal boring & drilling machines, (2).

## Radial Drills.

4' Gang plain radial, with extended column.

3 1/2' Baush plain, cone driveal.  
2' American sensitive radi.

## Grinders.

No. 1 Cincinnati, cutter and tool.  
No. 6A Bryant, hole and face.

No. 60 Heald, cylinder.  
6x32 Norton, plain, fine shape.

## Hammers.

40 lb. Bradley, helve, r. c.  
100 lb. Wais & Roos, belted.

600 lb. Pratt & Whitney board drop hammer.

## Lathes.

We offer Engine Lathes in all sizes from 9" to 50". What size and type do you need? A few good ones left for shell work.

## Milling Machines.

No. 7 Brainard, Lincoln type, (4).  
No. 13 Becker-B., universal.  
No. 1 Kempsmith, plain, (3).  
No. 2 Kempsmith, universal.  
No. 2 Kearney & T., plain.

No. 3 LeBlond, plain.  
No. 2 Owen, plain, new.  
No. 4 Garvin plain.  
No. 3 Owen, univ., new.

## Turret Lathes.

18" Warner & S. brass workers' lathe.  
20" Foster Fox monitor.  
2"x24" Jones & L., cone head, (3).

28" Gisholt, with taper attachment.  
Pearson hub machine, (could be used for boring shells).

## Screw Machines.

No. 4 Bardons & Oliver friction hd., power feed.

No. 1 Pratt & W., plain head.  
No. 2 Pratt & W., plain head.

## Miscellaneous.

Bar saw, 6 1/2" Smith & P., new.  
Bending roll, 6" Niles.  
Bolt cutter, 14" Merriam.  
Bolt cutter, double, 1 1/2" Acme.  
Broaching mche., No. 3 Lapointe.  
Bulldozer, No. 1 W.-White.  
Centering mche., 2-sp. Pratt & W.  
Gear cutter, 26"x16" Cincinnati auto.  
Gear cutters, 26x8" No. 3 B. & S., (2).  
Gear and p. cutter, Slate auto.  
Gear hobbors, 12" Adams-F., (4).  
Gear cutter, No. 3 Adams, like new.  
Gear hobbors, 12" Reynolds (2).  
Gear hobber, No. 2 1/2 Rhenania, new.  
Keyseater, 18" Morton.  
Mitering mche., No. 5 Fox.  
Oil separator, Reed & Curtis.

Planer, 21"x18"x44' Putnam.  
Planer, 30"x30"x7' Whitcomb.  
Pulley lathe, 26" Stevens.  
Pulley lathe, 30" Streit.  
Punch p., Nos. 1, 2 & 4 Rockf'd, o.b.i.  
Punch presses, 119 Crosby, o.b.i., (2).  
Punch & s., dbl., 1"x1" 17D New Doty  
Punch and s., sgl., 1"x1" No. 2 Cin.  
Saw, No. 14 Higley, motor drive.  
Shaper, 16" Smith & Mills.  
Shaper, 16" Walcott.  
Shaper, 20" Hendey.  
Shaper, 20" Kelley, s. g.  
Shear, pwr. squaring, Niagara, 14 ga.  
Sprocket b. & t. mche., Baker.  
Wire s. & c.o.mch., 3-16"x4' Adt, new  
Wire s. & c.o.mch., 3-16"x10' Shuster.

We just received a lot of AVEY High Speed Ball Bearing Drills, slightly used, in units of one, two, three and four spindles. Immediate delivery; act quickly.

**We are making some changes in our equipment and we offer at very reasonable prices, the following:**

1—30"x30"x 8' S. H. Smith-Silk Planer.

1—36"x36"x10' D. H. Pond Planer.

1—42"x42"x12' Wheeler Planer, S. H.

## **The Greaves-Klusman Tool Co.**

**Cincinnati, Ohio**

**In replacing our manufacturing equipment, we find the following first class Used Machine Tools, which we offer at attractive prices:**

### **TURRET LATHES**

No. 28—16"x 6' Lodge & Shipley, 3-step cone.

No. 166—18"x 6' Lodge & Shipley.

No. 111—22"x 7' Lodge & Shipley, 3-step cone, fric. hd.

No. 101—22"x 7' Lodge & Shipley, 3-step cone.

No. 122—two 24"x10' Lodge & Shipley, 3-step cone, fric. hd.

### **PLANERS & SHAPERS**

No. A —30"x30"x10' Detrick & Harvey, open side.

No. B —36"x36"x12' Niles.

No. 248—30"x30"x10' Gray.

No. 219—24"x24"x12' Ohio.

No. 239—16" Queen City b.grd.

No. D-223—26" Smith & Mills, shifting belt.

### **SPECIAL LATHES**

No. D 5302—20"x16' Lodge & Shipley No. 1 high speed.

No. 76—No. 3 Lodge & Shipley, rapid reduction.

### **ENGINE LATHES**

No. 142—18"x10' Lodge & Shipley, motor driven, pat.hd.

No. 136—20"x12' Lodge & Shipley, pat. hd.

No. 49-D—24"x12' Sellers.

### **GRINDERS**

No. 629—Four Landis plain.

### **MISCELLANEOUS**

No. 1326—Four Cleveland automatic screw machines.

No. 703—LeBlond No. 1 universal cutter and tool grinder.

No. 482—3-spindle Henry & Wright sensitive drill.

**The Lodge & Shipley Machine Tool Co.**  
**Cincinnati, Ohio, U. S. A.**

# **MACHINE TOOLS**

**FOR**

## **IMMEDIATE SHIPMENT**

### **LARGE STOCK ON HAND**

**ENGINE LATHES**  
**UPRIGHT DRILLS**  
**RADIAL DRILLS**  
**VERTICAL BORING MILLS**  
**HORIZONTAL BORING MACHINES**  
**SHAPERS**  
**PLANERS**  
**MILLERS and GEAR CUTTERS**  
**HAND TURRET and SCREW MACHINES**  
**AUTOMATIC SCREW MACHINES**  
**AUTOMATIC CHUCKING MACHINES**  
**BUFFERS and GRINDERS**  
**PLAIN and UNIVERSAL GRINDERS**  
**PUNCH PRESSES**  
**METAL SAWS and CUT-OFF MACHINES**  
**MISCELLANEOUS**

**WHICH DO YOU NEED?**

**HILL, CLARKE & CO. of CHICAGO**  
**125 N. CANAL STREET**

## *Now Made Of Steel*



### **"New Britain" Pressed Steel Bench Legs**

We sold thousands of cast-iron bench legs, which have given splendid satisfaction. But here is something stiffer, lighter, more graceful, with greater tensile strength.

They are everlasting, sanitary, sightly. They make possible a stiff bench construction, without dependence upon the wall, to support underneath shelf and bin when required, to allow heating pipes in the rear when necessary, and to permit change of bench location without loss or damage.

And with our patented stringer feature the legs may be placed eight feet apart, making much cheaper benching—even less than with unsatisfactory wooden supports.

*Write for Steel Bench Leg Folder*

*Other good things in our Shop Furniture Catalog*

**The New Britain Machine Co.**

**60 Chestnut St., New Britain, Conn.**



